



File Code: 2350

Date: September 26, 2012

Lorelei H. Oviatt
Kern County, CA AICP Director
2700 "M" Street,, Suite 100
Bakersfield, CA 93301-2323

Dear Ms. Oviatt,

I am submitting comments on the Draft Resource Management Plan (DRMP) Amendment and Draft Environmental Impact Statement (DEIS) and Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC). These comments are specific to the planning and management of the Pacific Crest National Scenic Trail (PCT).

The PCT traverses six of North America's seven ecozones, and has the greatest elevation range and highest percentage of trail miles in wilderness of the eleven designated national scenic trails. These factors give the trail a character significantly more diverse, remote and ecologically intact than the other trails. The PCT provides opportunities to experience landscapes that appear pristine and free from development by humankind. The nature and purpose of the PCT is to provide high-quality, scenic, primitive hiking and horseback-riding experiences, and to conserve natural, scenic, historic, and cultural resources along the PCT corridor. As its name implies, the Pacific Crest Trail is meant to showcase the diverse expanses and sublime scenery of the Cascade Mountains of Washington and Oregon, wind through the Klamath, Sierra Nevada, Piute, Tehachapi, San Gabriel, San Bernardino, and San Jacinto Mountain ranges of California, and follow the "crest" of existing ridgelines where feasible (PCT Comprehensive Plan).

The DRMP amendment and DEIS/DEIR does not appear to address compliance with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails, nor does it follow direction to safeguard the nature and purposes of National Trails. The landmark National Trails System Act of 1968 designates national scenic trails to provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas *and associated settings* through which such trails may pass. As the lead administrator for the trail, I request that the following actions are needed to ensure that a substantial interference or significant adverse impact to the nature and purposes of the PCT does not occur:

- **The design of this project must use strategies to avoid impacts to the PCT recreation and scenic experience.** The rationale that the development on private land adjacent to the federal land has already occurred and therefore, it is acceptable to place "a substantial number of the large-scale turbines (up to 410 feet to the top of the turbine blade), including a large number that would break the skyline of the nearby ridge tops south of SR 58" (4.18-3) is inconsistent with the BLM's national scenic trail policy direction to:



“safeguard the nature and purposes of assigned National Trails, provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas and associated settings through which such trails may pass, as well as the primary use or uses of the trail” (6250-1.6-1). Properly siting an activity may be the most effective way to mitigate potential visual impacts. Of particular concern are the ridgeline turbines that do not meet best management practices for avoiding impacts to the PCT. *Project design features should include a trail platform visual analysis from the Pacific Crest Trail and removal or relocation of turbines that create the highest level of contrast in form, line, color and texture within the project.*

- **The determination that the PCT is inventoried as a IVRM Class IV is inconsistent with the desired condition and nature and purpose of the PCT and should be corrected.** This project is within the foreground/middle ground distance zone of the PCT. The Visual Resource Management (VRM) objective should have been set on the basis that the PCT is a high sensitivity level travel route and a VRM of Class II or Class III would be the typical compatible objectives. To plan further development that allows increased impacts to a 25 mile segment of the trail with “further visual domination by the cumulative effect of wind and solar projects” and to acknowledge that “while Mitigation Measures 4.18-2 and 4.18-3 would reduce this impact, the resulting cumulative visual impact would be significant and unavoidable” (4.18-18) does not meet the intent for management of national scenic trails and violates appropriate visual management measures across agency policies.

*The DEIS needs to assess and disclose whether the proposed developments would substantially interfere with the nature and purposes of the PCT. If the determination is made that there is **not** substantial interference or significant adverse impacts, but the conclusion that impacts will occur, then offsite mitigation must be required.* The slower pace of equestrian and foot travel means that the time spent viewing the proposed project from the trail would likely be prolonged, significantly degrading the natural experience that recreationists demand of a national scenic trail journey. Though it is desirable to have viewshed and recreation experience mitigation occur within the locality of the project area (i.e. within the same county), if such an opportunity does not exist, it is acceptable for mitigation to occur on a trail-wide basis. An inventory of trail-wide PCT acquisition priorities exists and is available for finding willing sellers for land acquisition that would satisfy the requirements of offsite mitigation.

If the determination is made that the proposed developments would cause substantial interference or significant adverse impacts to the PCT, then this project will not comply with the National Trails System Act or BLM National Scenic and Historic Trail policy.

Of particular concern is the mitigation measure MM4.18-5. It directs that “Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association to develop a route enhancement plan for the Pacific

Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit vistas. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail.”

Procedures for relocation of the Pacific Crest Trail are outlined in the Optimal Location Review Process found at http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5368489.pdf. This process looks to find the optimal location of the trail based on the Design Criteria outlined in Appendix C of the Pacific Crest National Scenic Trail Comprehensive Plan, including providing for “maximum outdoor recreation potential,” “follow the “crest where feasible,” and “cross man-made features such as roads, aqueducts, and power transmission lines at right angles to avoid prolonger visual contact with them.” Since the trail is continuous from Mexico to Canada, relocation to improve the trail experience and provide for enhancement, would likely require a significant relocation – a process that Congress must approve and may not even be feasible. This mitigation measure should be reworded as follows:

MM4.18-5 Rewording: “In order to mitigate for impacts that do not substantially interfere with the nature and purpose of the PCT, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association (prior to the issuance of a Notice to Proceed by the BLM) to develop an offsite mitigation plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The plan shall identify feasible land acquisition opportunities to protect the PCT corridor and to improve the PCT recreation and scenic opportunities commensurate with the recreation and visual impacts. If directed by the BLM in consultation with the US Forest Service, the proponent shall provide funds for acquisition within one year of issuance of the first wind turbine generator building permit.”

Please contact Beth Boyst, National PCT Administrator, at 707-562-8881 or bboyst@fs.fed.us, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Beth Boyst', with a stylized, flowing script.

BETH BOYST
Pacific Crest Trail Program Manager

cc: Mark Conley, CA BLM NLCS Coordinator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

SEP 27 2012

Jeffrey Childers, Project Manager
California Desert District Office
Bureau of Land Management
22835 Calle San Juan de Los Lagos
Moreno Valley, California 92553

Subject: Draft Environmental Impact Statement for the Proposed Alta East Wind Project, Kern County, California (CEQ #20120205)

Dear Mr. Childers:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed Alta East Wind Project. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA continues to support increasing the development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We encourage BLM to apply its land management and regulatory authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

EPA provided extensive formal scoping comments for the project on August 15, 2011, including detailed recommendations regarding purpose and need, range of alternatives, cumulative impacts, biological and water resources, air quality, and other resource areas of concern. We are pleased to note that, as described in the DEIS, BLM's preferred alternative – Alternative C – would avoid the northern 318 acre parcel containing Joshua tree woodland habitat adjacent to the Pacific Crest Trail and the portion of the project site nearest active golden eagle nests. We also commend the early resource analyses and agency coordination that resulted in the evaluation of 7 alternatives, including two reduced footprint alternatives.

Notwithstanding the positive aspects of the proposed project, EPA is concerned about potential impacts to air quality and site hydrology, and we continue to have the concerns raised in our scoping comments regarding cumulative impacts to resources resulting from the 21 existing or proposed large-scale wind energy projects in the Tehachapi Wind Resource Area. We are also concerned about potential impacts to avian species, particularly the golden eagle and California condor. Based on our review of the DEIS, we have rated the project and document as *Environmental Concerns – Insufficient Information* (EC-2) (see the enclosed "Summary of EPA Rating Definitions").

With respect to adverse air quality impacts resulting from the construction period, we recommend requiring more stringent mitigation measures, phased construction, and early coordination among multiple renewable energy project construction schedules to minimize adverse air quality impacts to nearby sensitive receptors and the region.

With regard to site hydrology, we understand that, since the publication of the DEIS, the Army Corps of Engineers has determined that all aquatic resources on the project site are intrastate isolated waters not subject to section 404 of the Clean Water Act. While not federally jurisdictional, such resources are important features of the desert ecosystem, and we recommend that avoidance of those drainages and associated habitat on the site be maximized through design modifications to the wind turbine layout.

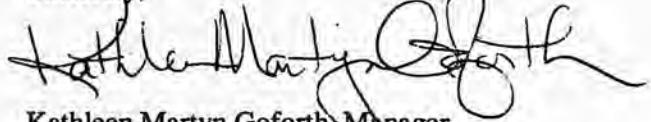
As noted in the DEIS, the project is located within an essential landscape linkage for a functioning wildland network; therefore, we recommend that the applicant and BLM continue to work closely with the U.S. Fish and Wildlife Service to protect habitat connectivity for special status species and avoid avian bird strikes during operations. In coordination with USFWS, the FEIS should identify sufficient lands for habitat compensation for the project's impacts, in order to ensure that compensatory lands are of comparable or superior quality, and are suitable compensation for the unique habitat on the project's site. In addition to including the final Avian and Bat Protection Plan and Eagle Conservation Plan, the FEIS should clarify how the applicant will comply with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Ongoing renewable energy programmatic planning efforts, such as the Desert Renewable Energy Conservation Plan, may be relevant to the proposed project. We recommend that the FEIS integrate the latest analyses from, and demonstrate the proposed project's consistency with, the DRECP. We also recommend that BLM commit, in the FEIS and ROD, to measures similar to those adopted for the Desert Sunlight Solar Project, to protect the portions of the subject Right-of-Way that were specifically avoided due to resource impacts, and we further encourage BLM to consider such a land use policy modification through the development of the DRECP.

The enclosed detailed comments elaborate on the above concerns and provide specific recommendations regarding analyses and documentation needed to assist in assessing potential significant impacts from the proposed project, and for minimizing adverse impacts. We are available to further discuss all recommendations provided.

Please note that starting October 1, 2012, EPA Headquarters will not accept paper copies or CDs of EISs for official filing purposes. Submissions on or after October 1, 2012, must be made through the EPA's new electronic EIS submittal tool: *e-NEPA*. To begin using *e-NEPA*, you must first register with the EPA's electronic reporting site - https://cdx.epa.gov/epa_home.asp. Electronic submission does not change requirements for distribution of EISs for public review and comment, and lead agencies should still provide one hard copy of each Draft and Final EIS released for public circulation to the EPA Region 9 office in San Francisco (Mail Code: CED-2). If you have any questions, please contact me at (415) 972-3843 or contact Tom Plenys, the lead reviewer for this project. Tom can be reached at (415) 972-3238 or plenys.thomas@epa.gov.

Sincerely,



Kathleen Martyn Goforth, Manager
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Jacquelyn Kitchen, Kern County Planning and Community Development Department
Ray Bransfield, United States Fish and Wildlife Service
Craig Bailey, California Department of Fish and Game

Israel Naylor, Chairperson and Dennis Mattison, Environmental Director (ED), Fort
Independence Reservation

Wayne Burke, Chairman and John Mosley, ED, Pyramid Lake

Lee Choe, Acting Chairman, San Juan Paiute

George Gholson, Chairperson and Michael Babcock, ED, Timbisha Shoshone

Daniel Gomez, Chairman and Oscar Serrano, Senior Engineer, Colusa Indian Colony

Carla Rodriguez, Chairperson and Clifford Batten, Environmental Coordinator, San Manuel

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED ALTA EAST WIND PROJECT, KERN COUNTY, CALIFORNIA, SEPTEMBER 27, 2012

Air Quality

EPA is concerned about the direct, indirect and cumulative impacts of construction emissions and fugitive dust associated with the project, even after mitigation measures have been taken into account. The proposed project is located in Mojave Desert Air Basin which is in non-attainment for federal eight hour ozone standards and State standards for particulate matter 10 microns or less in size (PM₁₀) (p. 4.2-18). The DEIS includes estimated emissions for criteria pollutants and a description of the mitigation measures that would be implemented to reduce the adverse air impacts identified in the DEIS; however, even with implementation of these mitigation measures, maximum daily construction emissions are predicted to exceed Eastern Kern Air Pollution Control District (EKAPCD) thresholds of significance for oxides of nitrogen (NO_x) and PM₁₀ (p. 4.2-4). We also note that the project's dispersion modeling analysis identified 'significant and unavoidable' impacts to residents living in close proximity to the project site (p. 4.2-5). In light of the area's nonattainment status, potential health impacts to local residents, and the construction of ten reasonably foreseeable wind and transmission projects in the area, all feasible measures should be implemented to reduce and mitigate air quality impacts to the greatest extent possible.

Recommendations:

Include, in the FEIS and Record of Decision (ROD), a commitment to implement all mitigation measures in the DEIS, and additional mitigation measures that go beyond those in the DEIS (see recommendations, below), on a schedule that would reduce construction emissions to the maximum extent feasible.

Describe, in the FEIS, how these mitigation measures would be made an enforceable part of the project's implementation schedule. We recommend implementation of applicable mitigation measures prior to or, at a minimum, concurrent with the commencement of construction of the project.

Discuss, and consider incorporating in the ROD, mitigation measures from the South Coast Air Quality Management District's Rule 403 to ensure best available and enhanced dust control measures for large scale construction projects, and estimate, in the FEIS, the additional emission reductions that could result.

The FEIS and ROD should include a commitment by the applicant to minimize disturbance to the natural landscape as much as possible, so that the need for measures to reduce fugitive dust is minimized or eliminated.

Correct, or provide support for, the statement that Alternative C would "Result in 80 percent lower annual/total construction emissions" (p. ES-8).

Additional mitigation for non-road and on-road engines

EPA supports incorporating mitigation strategies to reduce or minimize fugitive dust emissions, as well as more stringent emission controls for PM and ozone precursors for construction-related activity. We commend BLM for incorporating EKAPCD's Rule 402 to reduce PM emissions during construction, as well as MM 4.2-3 to further reduce fugitive dust on unpaved roads and particulate emissions from onsite dedicated equipment exhaust (p. 4.2-25). We note that MM 4.2-2 recommends Tier 3 engines, if available

(p. 4.2-24). EPA began phasing-in Tier 4 standards for non-road engines in 2008¹; however, the DEIS does not mention the availability of Tier 4 non-road engines. The use of such engines would result in an approximately 90% reduction in NO_x and PM emissions as compared to Tier 3.

Recommendations:

The FEIS should discuss, and include emission tables for, various classifications of on-road and non-road engines, highlighting emission levels for PM₁₀, PM_{2.5} and NO_x.

The FEIS should provide a list of the equipment to be used during construction and indicate the expected availability of Tier 3 and Tier 4 engines for each application.

The FEIS and ROD should commit to using non-road construction equipment that meets Tier 4 emission standards, when available, and best available emission control technology, for construction that occurs prior to Tier 4 standards availability.

The FEIS should update the tables in the Section 4.2 impact analysis to reflect the additional criteria pollutant emissions reductions that would result from using Tier 4 engines for each component of project construction.

We recommend that the applicant and BLM commit to implementing best available emission control technologies for construction, ahead of the California Air Resources Board's in-use off-road diesel vehicle regulations, regardless of fleet size.²

All applicable State and local requirements, and the additional and/or revised measures listed above, should be included in the FEIS, and the FEIS and ROD should include a condition that the applicant incorporate all such measures into construction contracts.

Cumulative Air Quality Analysis

Table 4.2-9 – Cumulative Annual Construction Emissions – indicates that construction of this project, in conjunction with the ten other foreseeable wind and transmission projects listed, would exceed annual EKAPCD emission thresholds for volatile organic compounds (VOCs), NO_x, PM₁₀ and PM_{2.5} (p. 4.2-19). We also note that the annual PM₁₀ emissions threshold will be exceeded during operations of reasonably foreseeable projects.

Recommendations:

Utilize the cumulative emissions data and, in consultation with the EKAPCD, develop a phased construction schedule, for projects that will undergo construction concurrently, that will not result in any violations of local, state or federal air quality regulations. EPA recommends incremental construction on-site to ensure air quality standards are not exceeded.

The FEIS should provide technical justification for any determination that a future project is too far from the proposed project to contribute to cumulative air quality impacts. While the DEIS states that a cumulative air quality analysis was conducted within one mile of the project site (p. 4.2-20), the appropriate area to consider depends on the emissions, size of the source, and release height, among other criteria.

¹ See EPA website: <http://www.epa.gov/nonroad-diesel/2004fr/420f04032.htm#standards>

² See CARB's Factsheet at: http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf

Estimate, and incorporate into the FEIS' cumulative impact analysis, air emissions for the High Speed Rail project and provide an update on the expected time frame for its construction.

If additional mitigation measures would be needed, based on the evaluation of cumulative emissions, or if the project would affect the ability of other foreseeable projects to be permitted, the FEIS should discuss this.

In light of the greater than 3,700 daily truck and worker commute trips expected (p. 4.16-14), develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow in coordination with concurrent nearby projects. Incorporate a discussion of potential transit options (including formal rideshare, carpooling, and bussing) to transport workers from the nearest population centers to the project sites, as well as other measures to facilitate accessibility to the job sites and reduce greenhouse gas emissions resulting from worker transportation.

Public Health and Sensitive Receptor Notification

In light of the projected daily emission exceedances and the identified 'significant and unavoidable' impacts to local residents, the FEIS should include a detailed discussion of the potential health effects of these emissions to sensitive receptors and consider a mitigation measure that would ensure that sensitive receptors are informed of these potential risks in advance of construction. This information should be provided concurrently with advanced notification of construction provided as mitigation for noise impacts.

Recommendations:

Expand the air quality impact analysis to include a detailed discussion of the potential health effects to sensitive receptors from exposure to PM₁₀ and PM_{2.5}, as well as toxic air contaminants.

Incorporate into MM 4.6-2 advanced notification to sensitive receptors of the potential health effects of PM₁₀ and PM_{2.5}, as well as toxic air contaminants.

Given the proximity of several schools to the project site, consider whether the pollutants and sources of concern pose a particular hazard to children's health (for example, PM₁₀, dust, heavy metals, or air pollution from near construction or roadway exposures). Discuss potential impacts to children's health in the context of Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), which directs each Federal agency, to the extent permitted by law and appropriate, to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and to ensure that its policies, programs, activities, and standards address these risks.

Greenhouse Gas Emissions - Construction and Operation Bid Specifications

To minimize greenhouse gas emissions from project construction and operations, we recommend that the FEIS and ROD include commitments to incorporate the following into all contract solicitations:

- a) Soliciting bids that include use of energy- and fuel-efficient fleets;
- b) Requiring that contractors ensure, to the extent possible, that construction activities utilize grid-based electricity and/or onsite renewable electricity generation rather than diesel and/or gasoline powered generators;

- c) Employing the use of zero emission or alternative fueled vehicles;
- d) Using lighting systems that are energy efficient, such as LED technology;
- e) Using the minimum amount of GHG-emitting construction materials that is feasible;
- f) Using cement blended with the maximum feasible amount of fly ash or other supplemental cementitious materials that reduce GHG emissions from cement production;
- g) Using lighter-colored pavement where feasible; and,
- h) Recycling construction debris to maximum extent feasible.

Water Resources

Drainages and Ephemeral Washes

Proposed project construction associated with access roads and transmission line development could directly (via temporary or permanent fill) and indirectly affect drainages and ephemeral washes within the proposed project area. Roughly 42 acres of State jurisdictional drainages were delineated on site. Based on the current project design, access roads and collector lines are expected to intersect ephemeral streams in 99 locations, and would result in temporary and permanent impacts to roughly 5 acres of California Department of Fish and Game-jurisdictional streambeds (p. 4.17-6).

Ephemeral washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. As the DEIS notes, drainages occurring in the region are likely to function as movement corridors, and upland habitat is expected to provide vital linkages for many terrestrial species (p. 3.21-5). Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert species.

The DEIS provides minimal information on the direct and indirect impacts to waters as a result of the proposed project and does not consider the up- and downstream reach and extent of waters or their importance in this landscape.

Recommendations:

The FEIS should characterize the functions of aquatic features, such as washes, on the proposed project site and discuss how the project would protect and maintain those functions.

Describe how the proposed project layout, roads, and drainage channels have been configured to avoid ephemeral washes to the maximum extent practicable.

Demonstrate that downstream flows would not be adversely impacted due to proposed changes to, and crossings of, natural washes.

Include a finalized drainage plan in the FEIS to facilitate assessment of impacts and effectiveness of mitigation measures.

To avoid and minimize direct and indirect impacts to ephemeral washes (such as erosion, migration of channels, and local scour), we suggest the following additions to MM 4.17-4 – BMPs for Activities In or Near Ephemeral Drainages (p. 4.17-26):

- Avoid placing turbine support structures in aquatic features to the maximum extent practicable.
- Implement all practicable opportunities to further reduce the footprint of project elements (parking, buildings, roads, etc.);
- Use natural washes, in their present location and natural form and including adequate natural buffers, for flood control, to the maximum extent practicable.
- Minimize the number of road crossings over waters and design necessary crossings to provide adequate flow-through during storm events to the maximum extent practicable.

The cumulative impacts analysis of Section 4.17, Vegetation Resources, includes a discussion of the impacts and mitigation measures for state jurisdictional drainages and concludes that “jurisdictional habitats are limited in the western Mojave Desert and arid foothills of the Tehachapi Mountains, and when considered cumulatively on a region-wide scale, impacts to jurisdictional areas would remain significant and unavoidable under CEQA” (p. 4.17-20). It appears that the project could result in a net loss of desert wash resource functions as application of MM 4.17-1 (Habitat Restoration and Revegetation Plan) allows for a choice between off site conservation, on-site restoration or mitigation banking (p. 4.17-23).

Recommendation:

Consider including a commitment to pursue opportunities to restore or enhance other lands within the watershed to replace desert wash functions lost on the project site and to demonstrate, and ensure, no net loss of desert wash resource function.

Fencing

The DEIS does not provide information about the potential effects of fencing on drainage systems. By entraining debris and sediment, fencing can interfere with natural flow patterns. Fence design should address hydrologic criteria, as well as security performance criteria.

Recommendations:

In the FEIS, describe where permanent fencing will be used and the potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

Review the National Park Service’s published article³ on the effects of the international boundary pedestrian fence on drainage systems and infrastructure, and ensure that such issues are adequately addressed with this project.

³ National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona.

Floodplain Hazards

Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. A 100-year Flood Hazard Area designated by FEMA was identified along Cache Creek (p. 4.19-7).

Recommendations:

Demonstrate, in the FEIS, how each alternative analyzed in the DEIS is consistent with the provisions of Executive Order 11988.

Provide, in the FEIS, a detailed description of the current FEMA floodplain, and include results of consultation with FEMA, if appropriate.

Groundwater

We are concerned about the potential groundwater drawdown and cumulative impacts to the Fremont Valley Groundwater Basin associated with the concurrent construction and operational phases of the proposed project in conjunction with the reasonably foreseeable projects in the vicinity. As prior BLM NEPA documents have noted, even modest drawdowns of 0.3 foot can adversely affect vegetation if groundwater drops below the effective rooting levels for a sustained period of time.⁴ A drop in groundwater levels could also impact neighboring wells, lower the water table, and adversely affect groundwater-dependent vegetation and woodlands.

Recommendations:

The FEIS should include confirmation that the selected municipal water district is able to supply the water needed for construction.

Expand, in the FEIS, MM 4.19-5 – Develop a Water Supply Contingency Plan – to include what mitigation measures would be taken, and by whom, should groundwater resources in the basin become overextended to the point that further curtailment is necessary due to, for example, additional growth, the continued influx of large-scale wind projects, drought, climate change, or the utilization of existing or pending water rights in the basin.

Include, in Section 4.20 of the FEIS, a numerical analysis, based on expected pumping rates and best available data, of the anticipated drop in groundwater levels and associated impacts to groundwater-dependent vegetation and woodlands.

Biological Resources

Endangered Species and Other Species of Concern

The site supports a diversity of mammals, birds, and reptiles, including special status wildlife species. While we note considerable coordination to date between the applicant, BLM and USFWS on the project's avian issues, we understand that a Biological Opinion has not been prepared for this project, and it is unclear whether a BO is currently under development specific to the resources identified. It is also unclear whether USFWS or the California Department of Fish and Game have reviewed or commented on the adequacy of the surveys and monitoring of biological resources conducted to date.

⁴ For example: Bureau of Land Management and California Energy Commission, March 2010. Staff Assessment and Draft Environmental Impact Statement for Genesis Solar Energy Project, p. C.2-4.

The USFWS finalized the voluntary Land-Based Wind Energy Guidelines on March 23, 2012, which provide a structured scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers, government agencies and local conservation organizations and tribes. The Guidelines use a “tiered approach” for assessing adverse effects to species of concern and their habitats.⁵

Recommendations:

The FEIS should provide an update on the Endangered Species Act consultation process and include the Biological Opinion, if one is issued, as an appendix.

Mitigation and monitoring measures that result from consultation with USFWS to protect sensitive biological resources, including desert tortoise, burrowing owl, golden eagles and the California condor, should be included in the FEIS and, ultimately, the ROD.

Discuss, in the FEIS, coordination with USFWS and CDFG and their review of the surveying, monitoring, and reporting protocols completed to date. Include a commitment to consistent application of USFWS and CDFG supported methods in future protection and mitigation efforts.

Coordinate with USFWS to incorporate recommendations from the recently published USFWS Land-Based Wind Guidelines into the FEIS and ROD.

Golden Eagles

The DEIS indicates that golden eagles were observed foraging in the project area during surveys in all four seasons (p. 4.21-7). Three active and 10 inactive golden eagle nests were found within 10 miles of the project boundary. Among golden eagle observations, 87.7 percent were recorded flying within the rotor-swept height (p. 2-22). Further, 7 golden eagle carcasses have been reported at the Pine Tree Wind Farm located roughly 10 miles north of the proposed project (p. 4.21-21).

All raptor species are protected under the Migratory Bird Treaty Act (MBTA). The golden eagle also receives protection under the Bald and Golden Eagle Protection Act (BGEPA). In September 2009, the USFWS finalized permit regulations⁶ under the BGEPA for the take of bald and golden eagles on a limited basis, provided that the take is compatible with preservation of the eagle and cannot be practicably avoided. The final rule states that if advanced conservation practices (ACPs) can be developed to significantly reduce take, the operator of a wind-power facility may qualify for a programmatic take permit. Most permits under the new regulations would authorize *disturbance*, rather than take.⁷ According to the DEIS, a regression analysis was used to predict raptor mortality. The analysis results predict an estimated fatality rate of 3 raptors per year from the proposed project (p. 4.21-19). While the DEIS acknowledges the risk of golden eagle mortality due to collision with the proposed project’s wind turbines

⁵ US Fish and Wildlife, Land-Based Wind Energy Guidelines, March 23, 2012, Available: <http://www.fws.gov/windenergy/>

⁶ See Eagle Permits, 50 CFR parts 13 and 22, issued Sept. 11, 2009. See internet address: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/BaldEagle/Final%20Disturbance%20Rule%2009%20Sept%202009.pdf>

⁷ See U.S. Fish Wildlife Service Migratory Bird Management Information: Eagle Rule Questions and Answers. <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/QAs%20for%20Eagle%20Rule.final.10.6.09.pdf>

is high (p. 4.21-21), the DEIS does not adequately address the acquisition of permits associated with disturbance or take of golden eagles.

Recommendations:

Identify, in the FEIS, specific measures to reduce impacts to eagles. Specify in the FEIS how approval of the proposed project would comply with the MBTA and BGEPA.

Discuss, in the FEIS, the applicability of the recently finalized USFWS permit regulations (50 CFR Parts 13 and 22) to the proposed project. Elaborate on the process and likelihood of obtaining a permit via these regulations.

Consider site specific risk mapping for avian species of concern as a means to site individual wind turbines in lower risk areas. An example of this type of study was performed at the Altamont Wind Resource Area.⁸ This study was funded by the California Energy Commission's Public Interest Energy Research program.

Discuss the applicability of the recent Eagle Conservation Plan Guidelines⁹ to the proposed project and, as necessary, describe compensatory mitigation to reduce the effect of permitted mortality to a no-net-loss standard. Include the Final Eagle Conservation Plan as an appendix.

Consider a tactical shut down option during critical hours of species activity, as appropriate, to minimize adverse impacts on such species.

Describe, in the FEIS, design practices, supported by USFWS and CDFG, for the proposed transmission line to minimize bird collisions and reduce raptor fatalities resulting from electrocution. Discuss the recommendations adopted from the following references: *Suggested Practices for Avian Protection on Power Lines: State of the Art in 2006* and the Avian Power Line Interaction Committee's *Mitigating Bird Collisions with Power Lines: The State of the Art in 1994*.

California Condor

As the DEIS notes, the project site is within the historic condor range and recent data suggest that there is range expansion in the general direction of the project area. Additionally, development of a wind resource facility at this location is considered to pose a high risk of collision to this species (p. 4.21-22).

To vet a potential strategy to avoid collisions, we understand that a demonstration of the Condor Monitoring System proposed under MM 4.21-9 is scheduled in October 2012.

Recommendations:

Include, in the FEIS, the results of any ESA consultation with the USFWS regarding the California condor and demonstrate how the project will comply with the MBTA for this species.

Include the condor in the Final Avian and Bat Protection Plan or develop a protection plan that is unique to the condor.

⁸ Smallwood, K. S., and L. Neher. 2008. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2009-065.

⁹ See Draft Eagle Conservation Plan Guidelines, February 2011: See internet address: http://www.fws.gov/windenergy/eagle_guidance.html

Address the potential for the transmission towers to provide attractive perching and roosting opportunities for the condor.

Elaborate on the demonstration of the Condor Monitoring System. Factors to address include:

- Its limitations, including how weather may affect its performance and whether the system has any potential 'blindspots';
- Contingency plans in the event of technical or mechanical failure; and,
- Results from other projects that have used this approach, if any.

Compensatory Mitigation

In light of the numerous renewable energy projects in the Tehachapi Wind Resource Area, the availability of land to adequately compensate for environmental impacts to resources such as state jurisdictional waters, Joshua tree woodlands, and desert tortoise, may serve as a limiting factor for development. For example, we note that mitigation measure MM 4.17-2 provides an extensive protocol to ensure adequate compensatory mitigation for impacts to Joshua tree woodlands and requires protection of compensatory lands 'into perpetuity'; however, the measure defers identification of compensatory lands to a later date. A total of 1,135 Joshua trees greater than 9 feet tall and 8 feet wide have been mapped on the site.

Recommendations:

Identify compensatory mitigation lands or quantify, in the FEIS, available lands for compensatory habitat mitigation for this project, as well as reasonably foreseeable projects in the Tehachapi Wind Resource Area.

Specify a clear timetable, to be adopted in the ROD, for ensuring adequate compensatory mitigation has been identified, approved and purchased, as appropriate. Describe the implications on project construction if the timetable is not met.

The FEIS and ROD should incorporate, for each affected resource, the mechanisms that would protect into perpetuity all compensatory lands that are selected.

Commit, in the FEIS and ROD, to exclude the non-developed portion of the subject ROW from further disturbance or development, as was agreed upon for BLM's Desert Sunlight Solar Farm, based on this project's resource analyses and the decision to select the proposed project's footprint to minimize environmental impacts (e.g. the 318 acre northern parcel of the project not included in Alternative C).

Climate Change

EPA commends the BLM for including estimates of greenhouse gas emissions from construction and operation of the project. The DEIS includes, however, only a brief discussion of the potential impacts of climate change on the project.

Recommendation:

Considering that the project is planned to be in operation for 30 years, the FEIS should include a description of how climate change may affect the project. Include, in the FEIS, information detailing the impacts that climate change may have on the project, particularly its sources of groundwater, and reclamation and restoration efforts after construction and decommissioning.

The FEIS should also discuss how climate change may affect the project's impacts on sensitive species.

Consistency with the California Desert Renewable Energy Conservation Plan

The California DRECP, scheduled for completion in 2013, is intended to advance State and federal conservation goals in the desert regions while also facilitating the timely permitting of renewable energy projects in California. The DRECP will include a strategy that identifies and maps areas for renewable energy development and areas for long-term natural resource conservation.

Recommendation:

The FEIS should elaborate on the DRECP, and include up-to-date maps illustrating the current boundaries and conceptual alternatives that are relevant to the proposed project. Discuss whether the site is expected to be included within renewable energy development areas of the DRECP and whether this is consistent with Kern County's wind resource development areas. Acknowledge that additional requirements and/or conditions may apply upon approval of the DRECP.

Cultural Resources and Coordination with Tribal Governments

A total of 15 cultural resources have been inventoried to date for the project (p. Appendix Q-4.4). The DEIS states that BLM has formally invited American Indian Tribes to consult at the government-to-government level throughout the review of the project and we commend BLM for initiating consultation in February of 2011 (p. 5-5).

Please note that we have copied 6 tribes on these comments in our effort to coordinate pursuant to Executive Order 13175. These tribes, while not geographically located near the project, have historical connections to the area where the project is proposed.

Recommendations:

Identify, in the FEIS, the tribes that were contacted for consultation, and describe the outcome of government-to-government consultation between the BLM and each of the tribal governments contacted.

Discuss issues that were raised, how those issues were addressed in relation to the proposed action, and how impacts to tribal or cultural resources will be avoided or mitigated consistent with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Section 106 of the National Historic Preservation Act, and Executive Order 13007, *Indian Sacred Sites*.

Update the Cultural Resources chapter to reflect the above recommendations related to tribal resources and revise the alternatives development and screening section (p. 2.1.1) to account for tribal concerns.

If not included in BLM's consultation communications to date, please include the additional tribal representatives copied on this comment letter to ensure that they are provided the opportunity to participate in the ongoing government-to-government consultation for the project.



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

August 14, 2012

Jacquelyn R. Kitchen
Kern County Planning and Community Development Dept.
2700 M Street, Suite 100
Bakersfield, CA 93301

Subject: JRK 01-11 Alta East Wind Energy Project by Alta WindPower, LLC.
SCH#: 2011071051

Dear Jacquelyn R. Kitchen:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 13, 2012, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2011071051
Project Title JRK 01-11 Alta East Wind Energy Project by Alta WindPower, LLC.
Lead Agency Kern County

Type EIR Draft EIR

Description Kern County and the Bureau of Land Management have jointly prepared a DEIS/EIR for general plan amendments, zone changes, and a CUP to allow for the construction of up to 106 wind turbines which would generate a maximum of 318 megawatts of energy. The project consists of 2,592 acres, of which 2,024-acres are located on federally-owned BLM land, with the remaining 568-acres being located on privately-owned land. Request includes the construction of ancillary facilities and supporting infrastructure and the concrete batch plants are necessary to provide concrete and materials for turbine, system block, substation, and building foundations. The application also proposes to incorporate flood hazard zoning for areas subject to flooding. Access to the project is provided by SR 58. The project will also include the construction of 14 miles of 230-kV overhead transmission corridor, which would ultimately connect to the SCE Windhub Substation.

Lead Agency Contact

Name Jacquelyn R. Kitchen
Agency Kern County Planning and Community Development Dept.
Phone 661 862 8619 **Fax**
email
Address 2700 M Street, Suite 100
City Bakersfield **State** CA **Zip** 93301

Project Location

County Kern
City Tehachapi
Region
Lat / Long 35° 6' 6" N / 118° 11' 5" W
Cross Streets 3 miles northwest of the unincorporated community of Mojave in the Mojave Desert
Parcel No. Multiple
Township mult. **Range** mult. **Section** mult. **Base** SBB&M

Proximity to:

Highways SR 58 & 14
Airports No
Railways No
Waterways Los Angeles Aqueduct
Schools No
Land Use Various

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects; Growth Inducing; Schools/Universities; Septic System; Sewer Capacity; Solid Waste

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 4; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 9; Regional Water Quality Control Bd., Region 6 (Victorville); California Energy Commission; Native American Heritage Commission; Public Utilities Commission

Document Details Report
State Clearinghouse Data Base

Date Received 06/29/2012

Start of Review 06/29/2012

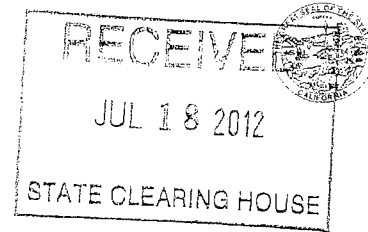
End of Review 08/13/2012

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

8/13/12
clear

July 16, 2012



Ms. Jacquelyn R. Kitchen

Kern County Department of Planning and Community Development

2700 M Street, Suite 100
Bakersfield, CA 93301

Re: SCH#2011071051; NEPA/CEQA Notice: draft Environmental Impact Report / draft Environmental Impact Statement (DEIR/DEIS) Alta East Wind Project: GPA 2; GPA 3; GPA 1 (PP11212); located three miles north of the unincorporated community of Mojave; Kern County, California.

Dear Ms. Kitchen:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. This area is known to the NAHC to be very culturally sensitive; therefore, careful and sensitive planning is urged.

The NAHC "Sacred Sites," as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American

contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
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July 16, 2012

Ms. Jacquelyn R. Kitchen

Kern County Department of Planning and Community Development

2700 M Street, Suite 100
Bakersfield, CA 93301

Re: SCH#2011071051; NEPA/CEQA Notice: draft Environmental Impact Report / draft Environmental Impact Statement (DEIR/DEIS) Alta East Wind Project: GPA 2; GPA 3; GPA 1 (PP11212); located three miles north of the unincorporated community of Mojave; Kern County, California.

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Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,



Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contacts

Kern County

July 16, 2012

Tule River Indian Tribe
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Tejon Indian Tribe
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Kitanemuk & Yowlumne Tejon Indians
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Kern Valley Indian Council
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Yokuts

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gov
(909) 862-5152 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2011071051; NEPA/CEQA draft Environmental Impact Report / Environmental Impact Statement (DEIR/DEIS) for the East Wind Alta Windpower Development Project (PP11212); located three miles north of the Community of Mojave; Kern County, California.

Native American Contacts

Kern County

July 16, 2012

Tubatulabals of Kern Valley
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Tubatulabals of Kern Valley
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(760) 379-4592 FAX

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Lahontan Regional Water Quality Control Board

September 26, 2012

File: Environmental Doc Review
Kern County

Jacquelyn Kitchen, Planner
Kern County Planning and Community
Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301
Email: kitchenj@co.kern.ca.us

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ALTA EAST WIND PROJECT, ALTA WINDPOWER DEVELOPMENT, LLC, KERN COUNTY, STATE CLEARINGHOUSE, NO. 2011071051

California Regional Water Quality Control Board (Water Board) staff reviewed the Draft Environmental Impact Statement / Report (Draft EIS/EIR) for the above-referenced project (Project). The DEIR, prepared by the Kern County Planning and Community Development Department (County), was received on August 7, 2012, and submitted in compliance with provisions of the California Environmental Quality Act (CEQA). The Draft EIS/EIR included a description of the proposed Project and a narrative review of the Project's potential impacts, including those to hydrology and water quality. Our comments on the Project are presented below.

Pursuant to CEQA Guidelines, California Code of Regulations (CCR), title 14, section 15096, responsible agencies must specify the scope and content of the environmental information germane to their statutory responsibilities. Water Board staff, acting as a responsible agency, have reviewed the above-referenced document as to how well the proposed Project protects water quality, and ultimately, the beneficial use of waters of the State. We hope the County will consider our comments and value our position with respect to protecting and maintaining water quality.

Project Overview

The proposed Alta East Wind Energy Project is a renewable energy development project located within the Mojave Desert area of eastern Kern County, in the Willow Springs – Cache Peak areas, near the City of Mojave. The purpose of this Project is to harness wind to produce electrical power; California has mandated a state-wide goal of 33% of its power to come from renewable resources by the year 2020. Water Board staff understands that this project would generate up to 318 megawatts of electricity from 106 wind turbine generators (WTGs). The Project area is approximately 2,592 acres, 536 acres of which are privately owned parcels. Project components include the installation of the 106 WTGs, creation of a 3-acre operations and maintenance yard, a

6-acre sub-station, two meteorological towers, one temporary concrete plant, an internal roadway system, collector substations, and underground and overhead electrical collection lines. The Project would require the construction and use of new facilities resulting in temporary disturbance of up to approximately 658 acres and permanent disturbance of approximately 94 acres.

Authority

All groundwater and surface waters are considered waters of the State. Surface waters include, but are not limited to, drainages, streams, washes, ponds, pools, or wetlands, and may be permanent or intermittent, either natural or manmade, and may or may not be identified as "blue-line streams" on published topographic maps. All waters of the State are protected under California law. State law assigns responsibility for protection of water quality in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the U.S. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the U.S.

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwaters of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan also includes prohibitions and policies to achieve water quality objectives including maintaining high quality waters and beneficial uses. The Basin Plan can be accessed via the Water Board's web site at http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

The Project is located within the Willow Springs Hydrologic Area (Antelope Hydrologic Unit) and Cache Peak Hydrologic Area (Fremont Hydrologic Unit) of the Lahontan Region. Water quality objectives and standards, for waters of the State, including those within these Areas, are outlined in Chapter 3 of the Basin Plan. Implementation of the proposed Project must comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan.

SPECIFIC COMMENTS

Use of Existing Roads Where Possible

Impacts to hydrology and water quality occur where roadways cross streams and/or other surface water resources. Figure 4 of Appendix I-2 details the proposed road crossings of ephemeral streams. However, no discussion was included regarding the necessity to build new roads rather than existing roads, and, thereby, further potentially impact hydrology and water quality. The Water Board stresses that avoidance and minimization strategies be considered first where water quality may be impacted. If these impacts are unavoidable, then mitigation must be considered. The proposed installation of new roads in the immediate vicinity of existing roads must be further

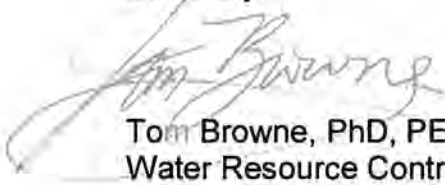
recommend the Draft EIS/EIR include a discussion in the hydrology study of the potential impacts of the Project to riparian habitat connectivity, and what measures will be taken to avoid and minimize such disruption.

Cumulative Impacts of Wind Energy Projects

Nearly two dozen wind energy projects either exist or are planned for the Tehachapi Foothills and other portions of Kern County. The cumulative impacts of these projects on water quality and hydrology, over time, must be fully evaluated in each Draft EIS/EIR. We re-iterate our request to the County to provide a thorough analysis of **cumulative impacts** of these WTG projects on the environment, in addition to considering their environmental impacts as singular, separate projects. The analysis should consider the point impacts of all alternative energy projects planned and constructed within the watershed and evaluate the potential impacts to groundwater recharge due to increased impervious surface and compacted soils, changes in the hydrology of the respective watershed(s) and potential flooding implications, and habitat connectivity. The cumulative impacts analysis should identify both regional and project-specific mitigation measures that, when implemented, will reduce potential impacts to a less than significant level.

Thank you for the opportunity to comment on the Draft EIS/EIR. If you have any questions regarding this letter, please contact me at (760) 241-7391 (thomas.browne@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).

Sincerely,



Tom Browne, PhD, PE
Water Resource Control Engineer

cc: State Clearinghouse (SCH 2012041063)
(via email, state.clearinghouse@opr.ca.gov)
Dave Hacker, California Department of Fish and Game
(via email, dhacker@dfg.ca.gov)
Paul Amato, Wetlands Regulatory Office, USEPA, Region 9
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July 31, 2012

Jacquelyn R. Kitchen
Kern Planning/Community Development
2700 M Street, Suite 100
Bakersfield, California 93301-2323

File: Ker-58-106
DEIR/DEIS
SCH #: 2011071051

Dear Ms. Kitchen:

Alta East Wind Energy - Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) - GPA 2, CUP 7, Map 168

Thank you for giving the California Department of Transportation (Caltrans) District 9 the opportunity to comment on the DEIR/DEIS for the proposed wind energy facility, northwest of the community of Mojave and straddling State Route 58. It appears concerns noted in our Notice of Preparation letter (August 11, 2011) have been addressed. We now offer the following:

- For encroachment permit information you may contact Kurt Weiermann at (780) 872-0781 or kurt.weiermann@dot.ca.gov. Also see:

Encroachment Permit Application:

[http://www.dot.ca.gov/hq/traffops/developserv/permits/pdf/forms/Std_E.P_Application_\(TR-0100\).pdf](http://www.dot.ca.gov/hq/traffops/developserv/permits/pdf/forms/Std_E.P_Application_(TR-0100).pdf)

Encroachment Permit Instructions:

http://www.dot.ca.gov/hq/traffops/developserv/permits/pdf/forms/encrchpermt_instruc.pdf

- Oversized vehicle permits are now issued from the Transportation Permits Office in Sacramento. Please see <http://www.dot.ca.gov/hq/traffops/permits/>.
- The Construction Traffic Control Plan may be sent to me for District 9 review.

We value a cooperative working relationship regarding project impacts upon State highways in eastern Kern County. I may be contacted at (760) 872-0785, with any questions.


Sincerely,

GAYLE J. ROSANDER
IGR/CEQA Coordinator

c: State Clearinghouse
Jeff Childers, Bureau of Land Management
Mark Reistetter, Caltrans

COUNTY OF KERN
DEVELOPMENT SERVICES AGENCY
ROADS DEPARTMENT
Office Memorandum

To: Lorelei H. Oviatt, AICP, Director
Planning & Community Development Department
Attn: Jacqui Kitchen, Supervising Planner
July 20, 2012

From: Warren D. Maxwell, Transportation Development Engineer
Roads Department 

Subject: 7-8.5b Draft Environmental Impact Report for the Alta East Wind Project
by Alta Windpower Development, LLC.(PP11212)

This Department has reviewed the DEIR for the subject project and recommends the following:

1. Page 3.16-1, States that Project access will be along private access easements off Oak Creek Road and Cameron Ridge Road to the Project Site. However, Mitigation Measure 4.16-4a (Page 4.16-18) requires the applicant to submit plans for the road design to the Kern County Roads Department for review and approval, which is not required because private access roads are not within the County's jurisdiction. All that is required, for the private access road, is a paved road approach tie-in to Oak Creek Road under a County encroachment permit. Approval of the private road should be through a grading permit obtained from the Engineering, Surveying and Permit Services Department.
2. Page 3.16-2, Site Access – Access to the northern region of the project is unclear, as it is separated from the southern region by a rail line and State Route 58. What are the primary and alternative access routes for this region; similar to those for the southern project region?
3. Page 4.16-18, Mitigation Measure 4.16-4b should be clarified to include any work within the County road right of way, not just road related activities. These permits can be obtained from our Permits Engineer.

Thank you for the opportunity to comment on this project, if you have any questions or comments please contact Steven Young at 862-8860.



*protecting and restoring natural ecosystems and imperiled species through
science, education, policy, and environmental law*

via email and USPS

9/27/2012

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Re: Comments on Draft Plan Amendment & Draft Environmental Impact Statement/Draft Environmental Impact Report for the Alta East Wind Project SCH No. 2011071051 DOI Document Control No. DES 12-18 Publication Index Number: BLM/CA/ES-2012-007+1793 CACA-0052537.

Dear Mr. Childers and Ms. Kitchen

These comments are submitted on behalf of the Center for Biological Diversity (Center) regarding the Draft Plan Amendment and Draft Environmental Impact Statement/Draft Environmental Impact Report for the Alta East Wind Project SCH No. 2011071051 DOI Document Control No. DES 12-18 Publication Index Number: BLM/CA/ES-2012-007+1793 CACA-0052537.

Introduction

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting emission reductions. The Center strongly supports the development of renewable energy production, and the generation of electricity from wind power. However, like all projects, proposed wind power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

Unfortunately, the Draft Environmental Impact Statement/ Draft Environmental Impact Report (DEIS/R) for the proposed plan amendment and right-of-way application fails to provide adequate identification and analysis of the significant impacts to California condor, golden eagle,

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other avian species, bats, desert tortoise, rare plants and plant communities, ephemeral streams and washes other biological resources, cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, the agencies have failed to fully examine in impact of the proposed plan amendment (and other similar proposed plan amendments) that would result in industrial sites sprawling across the California Desert Conservation Area within habitat that should be protected to achieve the goals of the federal bioregional plans as a whole and specifically habitat that is essential to the recovery of the endangered California condor, and threatened desert tortoise.

Purpose And Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a “hard look” at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply “going-through-the-motions.” It is well established that NEPA review cannot be “used to rationalize or justify decisions already made.” 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) (“the comprehensive ‘hard look’ mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.”) As Ninth Circuit noted an “agency cannot define its objectives in unreasonably narrow terms.” *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since “the stated goal of a project necessarily dictates the range of ‘reasonable’ alternatives.” *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that “[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives” in violation of NEPA).

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to “guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because “the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project.” *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

The BLM’s purpose and need for the proposed Alta East project is “to respond to a FLPMA ROW application submitted by the Applicant to construct, operate, maintain, and decommission a wind energy-generating facility and associated infrastructure on public lands

administered by the BLM in compliance with FLPMA, BLM ROW regulations, and other applicable Federal laws and policies” (DEIS/R at 1-2), and also states that the “BLM authorities include:

- Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the “production and transmission of energy in a safe and environmentally sound manner.”
- The Energy Policy Act 2005 (EPAAct 05), which sets forth the “sense of Congress” that the Secretary of the Interior should seek to have approved non-hydropower renewable energy projects on the public lands with a generation capacity of at least 10,000 MW by 2015.
- Secretarial Order 3285A1, dated March 11, 2009, and amended on February 22, 2010 which “establishes the development of renewable energy as a priority for the Department of the Interior.”

(DEIS/R at 1-2). The DEIS/R notes that an amendment to the CDCA Plan is needed in order to approve the project and identifies the preferred alternative as Alternative C, but provides little decision-making process on how that alternative was selected (DEIS/R at 2-25). BLM’s purpose and need is very narrowly construed to the proposed project itself and various configurations of the proposed. The purpose and need provided in the DEIS/R is impermissibly narrow under NEPA for several reasons, most importantly because it forecloses meaningful alternatives review in the DEIS/R. Because the purpose and need and the alternatives analysis are at the “heart” of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS/R.

The County does not provide a purpose and need for the project, but instead only provides a purpose for the DEIS/R – “project-level EIR will analyze the environmental impacts of the project” (at 1-3).

In its discussion of the need for renewable energy production the DEIS/R fails to address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure including the State of California¹.

The habitat fragmentation, impacts to avian species, loss of connectivity for terrestrial wildlife, and introduction of predators and invasive weed species associated with the proposed project in the proposed location may run contrary to an effective climate change adaptation strategy. Siting the proposed project in the proposed location impacting ecologically functioning ecosystems, occupied habitat and important habitat linkage areas, desert washes and other fragile desert resources could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. Moreover, the project itself will emit greenhouse

¹ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

gases during construction and manufacturing in particular and the DEIS/R contains no discussion of ways to avoid, minimize or off-set these emissions although such mitigation is clearly necessary. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity.

Alternatives Analysis is Inadequate

The alternatives analysis is inadequate even with the inclusion two smaller 97- and 87-MW project alternatives. At least one alternative should be considered that avoids of all desert tortoise habitat. Moreover, other alternatives should be considered for example, siting on previously degraded lands. In addition, the Notice and the DEIS/R should have considered distributed renewable energy alternatives, a no-build alternative that would focus on programs to efficiency and conservation efforts which could more than make up in energy savings the power that would be produced by this project, and other alternatives that could avoid impacts of the proposed project as well as impacts of the associated transmission lines and substations.

The DEIS/R failed to adequately address such any off-site alternative that would significantly reduce the impacts to biological resources including the California condor, desert tortoise and their occupied habitat, and other special status species including golden eagles and other raptors . The Center urges the BLM/County to revise the DEIS/R to adequately address these and other issues detailed below and then to re-circulate both a revised Notice and a supplemental DEIS/R for public comment.

The DEIS/R Does Not Adequately Describe Environmental Baseline

BLM is required to “describe the environment of the areas to be affected or created by the alternatives under consideration.” 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay Fisherman’s Marketing Ass’n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit states that “without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA.” Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. See *Center for Biological Diversity v. U.S. Bureau of Land Management, et al.*, 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands).

The DEIS/R fails to provide adequate baseline information and description of the environmental setting in many areas including in particular the status of rare plants, animals and communities including California condors, golden eagles, desert tortoise, burrowing owls and other imperiled and common desert species.

The baseline descriptions in the DEIS/R are inadequate particularly for the areas where surveys were a single season, a day, or not performed at all. As discussed below, because of the

deficiencies of the baseline data for the proposed project area, the DEIS/R fails to adequately describe the environmental baseline. Many of the rare and common but essential species and habitats have incomplete and/or vague on-site descriptions that make determining the proposed project's impacts difficult at best. Some of the rare species/habitats baseline conditions are totally absent and as a result no impact assessment is provided either. A supplemental document is required to fully identify the baseline conditions of the site, and that baseline needs to be used to evaluate the impacts of the proposed project.

Failure to Identify and Analyze Direct and Indirect Impacts to Biological Resources

The DEIS/R fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment. The Ninth Circuit has made clear that NEPA requires agencies to take a “hard look” at the effects of proposed actions; a cursory review of environmental impacts will not stand. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150-52, 1154 (9th Cir. 1998). Where the BLM has incomplete or insufficient information, NEPA requires the agency to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; *see National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9th Cir. 2001) (“lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.”)

Moreover, BLM and the County must look at reasonable mitigation measures to avoid impacts in the DEIS/R but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset. Even if the discussion may of necessity be tentative or contingent, NEPA requires that the BLM provide some information regarding whether significant impacts could be avoided. *South Fork Band Council of Western Shoshone v. DOI*, 588 F.3d 718, 727 (9th Cir. 2009).

The lack of comprehensive surveys is particularly problematic. Failure to conduct sufficient surveys – and a single year or season is inadequate to evaluate the resources and uses on this large of a project site - prior to construction of the project also effectively eliminates the most important function of surveys - using the information from the surveys to avoid and minimize harm caused by the project and reduce the need for mitigation. Often efforts to mitigate harm are far less effective than avoiding and preventing the harm in the first place. In addition, without understanding the scope of harm before it occurs, it is difficult to quantify an appropriate amount and type of mitigation. For example, the DEIS/R admits that no surveys were done for invertebrates (at pg. 4.21-2).

The DEIS/R fails to provide all of the information necessary for decisionmakers and the public to adequately review the proposed project. Therefore the impacts cannot be fully analyzed or mitigated appropriately or fully. For this reason alone, a supplemental or revised DEIS/R needs to be provided and additional alternatives are included (including a preferred alternative) that avoids and reduces the impacts to biological resources.

Avian Species and Risk Assessment

While the DEIS/R attempts to provide a risk assessment to avian species (primarily birds) and collision with wind turbines, recent science shows that “No relationship between variables predicting risk from E[nvironmental] I[m]pact] A[ssessments]s and actual recorded mortality was found” and more importantly that “EIAs are usually conducted at the scale of the entire wind farm. The correlation between predicted mortality and actual mortality must be improved in future risk assessment studies by changing the scale of these studies to focus on the locations of proposed individual wind turbine sites and working on a species specific level”.² Unfortunately the DEIS/R risk assessment is at the scale of the entire wind project and fails to evaluate specific turbine locations and their impact on avian species. While micrositeing is discussed in Appendix D-29 as part of the Preliminary Draft #2 Avian Protection Plan, the point of micrositeing is to reduce impact to species by analyzing the use of the proposed project site by avian and bat species and designing the project to not site turbines in locations used by those species. However, the DEIS/R has not included this crucial avoidance and minimization strategy as part of its environmental analysis, and instead has deferred it to a post-environmental review plan (the final ABPP). This individual wind turbine analysis (microsite analysis) actually should be done prior to the DEIS/R in order to avoid and minimize environmental impacts. It would then provide information that could also help inform additional siting alternatives that could also be designed to minimize impacts to rare, migratory and resident avian species.

Migratory Birds

The DEIS/R briefly discusses migratory birds, however, it fails to discuss or even include studies on nocturnal bird migration. Recent published scientific reports indicate that greater than 10% of nocturnal migrating songbirds migrating over ridges fly at elevations putting them within the area of rotating turbines.³ An on-site nocturnal radar study in California’s desert at San Geronimo Pass prior to the wind energy development there, reported that “approximately 37 million birds passed through the Coachella Valley in the fall and an additional “approximately 32 million birds flew through the Coachella Valley during spring 1982,” making the total in 1982 approximately 70 million birds. The study concludes “we estimate that approximately 256,000 birds/km could potentially come into contact with wind turbine generators each fall in the WRSA” and “approximately 182,000 birds/km potentially come into contact with wind turbine generators each spring.”⁴ The document needs to analyze the on site impacts of the large turbines proposed at Alta East Wind project on nocturnal migratory songbirds and bats in comparison to data on a nearby non-windfarm site.

Furthermore, the DEIS/R fails to acknowledge that the Alta East Wind project is located on the Pacific Flyway and provides no data for the impacts of the project on nocturnal migratory birds and bats or on migratory pathways for birds and bats. Migratory birds are protected by the Migratory Bird Treaty Act of 1918 and the project must identify, analyze and address these impacts. Recent research has established that species such as golden eagles tend to hunt or

² Ferrer et al. 2011

³ Mabey et al. 2006

⁴ McCrary, et al 1982

migrate at or below ridgelines, potentially putting these species at risk especially for turbines that are deployed in ridge areas (Manville 2009). The proposed “mitigation” measures fail to provide any real mitigation, but instead appear to be “best management practices”. Avoidance measures that should be required include having a full-time biologist during daylight hours of turbine operation, to detect target species (California condors, golden eagles, etc.) from observation towers and if the target species were detected, the biologist would have the ability to shut down the WTGs in portions of the site to help minimize and avoid collisions with WTGs. We have hopes that in the future, technologies such as avian radar systems or high resolution video camera technologies could be implemented for the same purposes, but currently the technology is not proven. The biologist would also be responsible for determining when the eagle has left the project site so that operation of the WTGs could resume. We recognize that this current strategy may not be 100% effective for avoidance of target species and it would do nothing for nocturnal migration.

California Condors

We agree with the statement in the DEIS/R that “a wind energy facility built where California condors commonly occur would likely be at risk for lethal take of this species” (DEIS/R at pg. 4.21-21). With the expanding range of the California condor – a success story of the Endangered Species Act - additional wind turbine development in the Tehachapi Wind Resource Area will only increase the likelihood that a California condor will be hit by a wind turbine, likely causing mortality. Therefore it is incumbent upon the BLM and the County to require implementation of all reasonable avoidance and minimization measures for this species, which is one place that this DEIS/R is woefully inadequate. The DEIS/R also fails to identify if a “take” permit is being sought for California condor. We support a regional approach to condor conservation, and find the DEIS/R impact analysis and cumulative analysis at odds with conservation goals for the California condor.

The mitigation measures proposed in Appendix D-29 are actually not mitigation measures at all. For example, they call for “Elimination of lead bullet fragments and lead shot from the current and future range of the California condor in California” (at pg. 4-5), but that is already required by law (Ridley-Tree Condor Conservation Act of 2008). Grazing and hunting simply should not be allowed on the proposed project site, eliminating the feeding opportunities to condors of animal carcasses on site. Supplemental feeding, while currently in use by the U.S. Fish and Wildlife Service is not a long-term strategy for recovery of the condor. The proposal of using it for “mitigation” suggests an attempt to “grow” condors, which is very controversial. It is unclear what benefits to the condor would result from “hiring a full-time biologist” (D-29 at 4-5). Amazingly, while these purported “mitigation measures” are from Appendix A of Appendix D-29, one mitigation measure that was not brought forward from Appendix A is the “Implementation of a Common Raven Management Plan” (at pg. 1 of Appendix A) which would also have benefit to the desert tortoise.

The proposed monitoring program for California condors (and other avian species) is inadequate in that it proposes to monitor for only five years. In order to accurately document impacts to avian species, monitoring must occur *over the life of the project*.

Golden Eagle

The DEIS/R fails to adequately address the issue of golden eagle collisions with turbines. Nor does it address the Bald and Golden Eagle Protection Act, which imposes strict limitations on take of eagles. The Final Rule on Eagle Act Take Permits (74 FR 48635) establishes a “no net loss” standard for eagles, and it is unknown whether proposed mitigation efforts in the Draft #2 Eagle Conservation Plan (Appendix D-30) will pass muster with the U.S. Fish & Wildlife Service (USFWS). The DEIS/R fails to make any determination on the significance of impacts to golden eagles from the operation and maintenance, which is likely where the greatest and cumulative impacts will occur.

The DEIS/R also notes that “The nearest active nests are located 3.0 miles to the northwest, 3.8 miles to the north, and 6.8 miles to the north of the AEWP. Ten inactive golden eagle nests were identified within the 10-mile nest survey buffer and 3 additional inactive nests were identified just outside the 10-mile buffer. The closest of these inactive golden eagle nests is 1.2 miles to the northwest of the AEWP.” (DEIS/R at 4.21-7). However, the National Golden Eagle Colloquium on March 2-3, 2010 attended by 85 participants from various agencies and Golden Eagle and raptor scientists from across the country contradicts this analysis. The scientists concluded that “[b]uffers we currently recommend are at least 4 - 10 air miles from a golden eagle territory.”(note that territory encompasses nest site)⁵. In fact, the DEIS/R fails to identify the actual number of golden eagle territories that occur on the proposed project site.

The Draft #2 Eagle Conservation Plan (Appendix D-30) also needs to follow the Draft Eagle Conservation Plan Guidance⁶ as issued by the U.S. Fish and Wildlife Service.

Comparing densities of golden eagles from other parts of the country is inappropriate. The goal of the environmental review is to identify the impacts to the local environment that includes maintaining golden eagles across their natural range. Consequently impacting golden eagles even in areas of low densities fails the metric of maintaining eagles across their range.

We strongly urge that the DEIS/R be revised and re-circulated in order to reconsider impacts to golden eagles more thoroughly using recommendations and analysis by eagle experts who performed the surveys as well as the data be peer review by qualified independent eagle experts. Such reconsideration would allow the agencies to fully evaluate the site and whether it should be abandoned due to unacceptable, unmitigable risk to golden eagles.

Raptors

Raptor species on the proposed project site are protected under the federal Migratory Bird Treaty Act as well, including those species known to be vulnerable to turbine collision such as the red-tailed hawk. Many important questions remain unanswered including, for example, the following:

⁵ National Golden Eagle Colloquium 2010

⁶http://www.fws.gov/windenergy/docs/ECP_draft_guidance_2_10_final_clean_omb.pdf

- How close are red-tailed hawk nests and other raptor species nests located to proposed wind turbines?
- Combined with nest survey results, is red-tailed hawk use (data from point count surveys) of the Alta East Wind project considered reflective of a low or high density of this species as compared to other parts of the County?
- Is the proposed Alta East Wind project likely to result in impacts to the local population of red-tailed hawks from turbine collision and if so, how will these impacts be minimized?

These and other similar species questions need to be addressed in a supplemental EIS/R, because of the potential for significant impacts to local (and migratory) raptor populations, which are simply not analyzed in the DEIS/R.

Burrowing Owl

The DEIS/R notes that only a single burrowing owl was documented in the proposed project area (DEIS/R at 4.21-9). Recent data from the statewide census identified that the Sonoran desert harbors few Western burrowing owls.⁷ Even more worrisome is the documented crash of burrowing owls in their former stronghold in the Imperial Valley. The Imperial Valley has had a recently documented decline of 27% in the past 2 years⁸, resulting in an even more dire state for burrowing owls in California. Because burrowing owls are in decline throughout California, and now their “stronghold” is documented to be declining severely, the burrowing owls on this proposed project site (and on other renewable energy projects) become even more important to species conservation efforts. The recirculated or supplemental DEIS/R needs to evaluate the potential impact of the proposed project on this regional distribution of owls.

The DEIS/R needs to incorporate the most recent guidance from the California Department of Fish and Game on the impact evaluation and mitigation for burrowing owl⁹. The DEIS/R needs to include specific burrowing owl mitigation in case, if the project moves forward, burrowing owl are identified on site during pre-construction monitoring. Mean burrowing owl foraging territories are 242 hectares in size, although foraging territories for owl in heavily cultivated areas is only 35 hectares¹⁰. Regardless, the acquisition must adequately mitigate for the number of territories found on site, calculated by using the mean foraging territory size times the number of owls. Using the average foraging territory size for mitigation calculations may not accurately predict the carrying capacity and may *overestimate* the carrying capacity of the proposed project site especially in this area of the Mojave desert. Lastly, because the carrying capacity for burrowing owls is tied to habitat quality, language should be included that mitigation lands that are acquired for burrowing owl be native habitats on undisturbed lands, not cultivated lands, which are subject to the whims of land use changes. The long-term persistence of burrowing owls lie in their ability to utilize natural landscapes, not human-created ones.

7 Wilkerson and Siegel 2011

8 Manning 2009

9 www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf

10 USFWS 2003

While “passive relocation” does minimize immediate direct take of burrowing owls, ultimately the burrowing owls’ available habitat is reduced, and “relocated” birds are forced to compete for resources with other resident burrowing owls and may move into less suitable habitat, ultimately resulting in “take”. Other renewable energy projects in the area have been required to construct two burrows for every burrowing owl burrow disturbed or destroyed and this strategy should be included in the supplemental DEIS/R.

Bats

The DEIS/R inadequately assesses potential impacts to bats. The DEIS/R states that no bat roosts were found on site, but incompletely evaluates bat foraging on site. In addition, the DEIS/R fails to address a potential impact that could be avoided – the color of the turbine towers. Studies have shown that the color of the typical turbine towers is key in attracting insects on which bats prey at significantly higher levels.¹¹

Additionally data suggest that bat mortality at tall wind turbines is directly linked to nocturnal insect migrations¹², yet this issue is also not addressed in the DEIS/R and needs to be included in a supplemental DEIS/R. With the numerous bat species that are currently foraging or have potential to forage on the project site, the impact analysis is woefully inadequate.

Desert Tortoise

The DEIS/R identifies that five desert tortoise were located on the proposed project site. However the DEIS/R fails to estimate the number of desert tortoises that occur in the project area and analyze how many will be impacted by the proposed project. It appears that the desert tortoise will remain on site during construction and operation, and yet no clear information on how those desert tortoise will be protected from harm in perpetuity.

It is unclear the amount of desert tortoise habitat that occurs on the site. The DEIS/R fails to analyze the impacts to tortoise habitat. Impacts not only from turbine construction and road building will fragment the habitat and provide additional access to others into areas that previously were inaccessible.

While mitigation is proposed, it is too vague and confusing to be meaningful: “Permanent impacts would be mitigated through one or more of the following: acquisition and conservation of off-site lands; onsite restoration, enhancement, and management of disturbed areas not impacted by the AEWP; or mitigation banking” (DEIS/R at 4.21-5). Additionally the DEIS/R appears to rely on the acquisition for desert tortoise mitigation as mitigation for other rare species (nested mitigation). The DEIS/R needs to clarify that the desert tortoise mitigation lands must provide habitat for the “nested” species mitigation and if alternative desert tortoise mitigation (restoration, enhancement and management of disturbed areas) is selected, mitigation is still required for the other species. We also note that successful plant “restoration” or “enhancement” is notoriously difficult in the Mojave desert and requires timelines that are

¹¹ Long 2011

¹² Rydell 2010

typically much longer than the proposed project. Also, it is unclear if “restoration” or “enhancement” includes moving additional tortoises into the area – please clarify. The DEIS/R also needs to clarify what it means by “management of disturbed areas not impacted by AEWP”. Does this mean fencing areas off?

Cryptobiotic Soil Crusts Not Identified and Avoided.

The proposed project is located in the Mojave Air Pollution Control District, which is already in non-attainment for PM-10 particulate matter¹³. The construction of the proposed project further increases emissions of these types of particles because of the disruption and elimination of potentially hundreds of acres of cryptobiotic soil crusts. Cryptobiotic soil crusts are an essential ecological component in arid lands. They are the “glue” that holds surface soil particles together precluding erosion, provide “safe sites” for seed germination, trap and slowly release soil moisture, and provide CO₂ uptake through photosynthesis¹⁴.

The DEIS/R does not describe the on-site cryptobiotic soil crusts. The proposed project will disturb an unidentified portion of these soil crusts and cause them to lose their capacity to stabilize soils, trap soil moisture and keep small soil particles from becoming airborne (PM₁₀). The DEIS/R fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. It is unclear how many acres of cryptobiotics soils will be affected by the project. The revised or supplemental DEIS/R must identify the extent of the cryptobiotic soils on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

Locally Unique Plant Series

The DEIS/R identifies a plant association that occurs on 464.1 acres of the project site as Brittlebush Scrub-Mormon Tea Scrub (DEIS/R at pg. 3.17-3). In the Appendix D-1 (at pg. 3-3), Brittlebush is identified as *Encelia farinosa* and is mapped on 698 acres (Figure 3 – no page number). *Encelia farinosa* is not documented to occur in Kern County by the Flora of Kern County, California (Twisselman 1995) except as a “waif” at Edwards Air Force Base. While we are aware of *Encelia farinosa* occurrences along Highway 14 near California City that were introduced as part of a CalTrans “revegetation” project, this DEIS/R documents a large naturally occurring series that represents a regionally unique plant series. As a regionally unique plant community (series), it should be recognized and the impacts to this series should be more carefully analyzed and mitigated.

The Project Fails Avoid Impacts to All Desert Washes and Ephemeral Streams

Because of the uniqueness of water resources in the desert, all desert washes and ephemeral streams should be avoided. As the BLM and County are well aware desert washes are fragile and disturbance of the soils in these areas can significantly increase erosion and

¹³ <http://www.mdaqmd.ca.gov/index.aspx?page=355>

¹⁴ Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007

sedimentation. Although water is scarce and flooding infrequent in desert regions, ephemeral and intermittent streams are a significant ecosystem component and washes are critical to the survival of many native plants and animals. *See, e.g.,* Levick, et al. (2008). “Ephemeral and intermittent streams make up approximately 59% of all streams in the United States (excluding Alaska), and over 81% in the arid and semiarid Southwest (Arizona, New Mexico, Nevada, Utah, Colorado and California).” *Id.* at iii. Ephemeral and intermittent streams provide the same ecological and hydrological functions as perennial streams by moving water, nutrients, and sediment throughout the watershed. When functioning properly, these streams provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering. They provide a wide array of ecological functions including forage, cover, nesting, and movement corridors for wildlife. Because of the relatively higher moisture content in arid and semiarid region streams, vegetation and wildlife abundance and diversity in and near them is proportionally higher than in the surrounding uplands. *Id.*

The use of washes for any of the proposed project facilities, including access roads and transmission should be prohibited as well as destruction of vegetation. Specifically, creation of a network of new roads in the washes to access turbines and infrastructure outside of the washes should be avoided because such roads would destroy vegetation and habitat, increase siltation, and destroy soil integrity.

Key Plans Not Provided

The DEIS/R relies on numerous “conservation” plans for on-site resources as avoidance and minimization, however only two of these plans are actually provided for public review (Draft Golden Eagle Conservation Plan and Draft Avian and Bat Protection Plan) and they are *draft* plans only. Absent finalized plans which the wildlife agencies have approved, it remains unclear if the “conservation” plans are actually adequate to minimize and mitigate the consequential impacts. And as noted above, because all of the significant impacts have not yet been identified and analyzed these plans cannot be adequate and must be updated once additional, supplemental environmental review is prepared and circulated for public review.

In addition to the final eagle plan and final avian and bat protection plan, other missing plans include:

- Worker Education Awareness Program (DEIS/R at 4.21-4)
- Weed Management Plan (DEIS/R at 4.21-5)
- Habitat Restoration and Revegetation Plan (DEIS/R at 4.21-5)
- Fugitive Dust Control Plans (construction and operation) (DEIS/R at 4.21-5)
- Raven Control Plan (DEIS/R at 4.21-5)
- Habitat Restoration/Revegetation Plan (HRRP) (DEIS/R at 4.21-41)
- Wildlife Mortality Monitoring Program (DEIS/R at 4.21-4)

In the absence of these plans, it is impossible to evaluate the minimization of impacts and the actual impacts to the flora and fauna currently on the project site.

General Mitigation Acquisition Requirements Are Flawed

For a number of species – condor, golden eagle etc. - habitat acquisition to off-set impacts is not required. Even for those species where it is an option (desert tortoise) or requisite (burrowing owl), any acquired habitat must already be inhabited by the same species for which mitigation is sought. This mitigation strategy ensures a *net decrease* in habitat for impacted species. To actually provide mitigation that staunches species' habitat losses, mitigation ratios must actually address the impacts to each species and must be high enough to fully mitigate the impacts to those species.¹⁵ A *minimum* 5:1 mitigation is more appropriate for all habitat impacts to assure, not only that the project impacts are mitigated, but that the net losses of habitat for rare species are stopped.

Cumulative Impacts

Cumulative impacts analysis is a critical part of any CEQA analysis.

[t]he cumulative impact analysis must be substantively meaningful. “A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval. [Citation.] [Citation.] [¶] While technical perfection in a cumulative impact analysis is not required, courts have looked for ‘adequacy, completeness, and a good faith effort at full disclosure.’ (Cal. Code Regs., tit. 14, § 15151.) “A good faith effort to comply with a statute resulting in the production of information is not the same, however, as an absolute failure to comply resulting in the omission of relevant information.” [Citation.]” (*Mountain Lion Coalition v. Fish & Game Comm.* (1989) 214 Cal. App. 3d 1043, 1051-52.)

(*Joy Road Area Forest and Watershed Assoc. v. Cal. Dept. of Forestry* (2006) 142 Cal. App. 4th 656, 676.) Where, as here, the impacts of a project are “cumulatively considerable” the agency must also examine alternatives that would avoid those impacts and mitigation measures for those impacts. (CEQA Guidelines §15130(b)(3).) In some cases the potential cumulative impacts will be best addressed by compliance with existing regulations (such as land use plans, conservation plans, or clean air act standards), in other cases avoidance and mitigation measures will be site specific, and in some cases new regulations or ordinances may be needed to address cumulative concerns.

We agree with the DEIS/R that under CEQA, cumulative impacts to Wildlife Movement and Migration Corridors, Avian and Bat Collisions and to Displacement of Special-Status Avian and Bat Species are significant (DEIS/R at 4.21-29), and therefore consideration of the County's

¹⁵ <http://onlinelibrary.wiley.com/doi/10.1111/j.1526-100X.2008.00382.x/full>
<http://www.wcrc.govt.nz/mtwilliam/hearing/applicant/Mark%20Christensen%20-%20Biodiversity%20offset.pdf>

purpose and need for this project should be clarified. Approving another wind project will do nothing to decrease the significant impacts to these imperiled resources.

Under NEPA, a cumulative impact is “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7. The Ninth Circuit requires federal agencies to “catalogue” and provide useful analysis of past, present, and future projects. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-810 (9th Cir. 1999).

“In determining whether a proposed action will significantly impact the human environment, the agency must consider ‘[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.’ 40 C.F.R. § 1508.27(b)(7).” *Oregon Natural Resources Council v. BLM*, 470 F.3d 818, 822-823 (9th Cir. 2006). NEPA requires that cumulative impacts analysis provide “some quantified or detailed information,” because “[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide.” *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998); *see also id.* (“very general” cumulative impacts information was not hard look required by NEPA). The discussion of future foreseeable actions requires more than a list of the number of acres affected, which is a necessary but not sufficient component of a NEPA analysis; the agency must also consider the actual environmental effects that can be expected from the projects on those acres. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004) (finding that the environmental review documents “do not sufficiently identify or discuss the incremental impact that can be expected from each [project], or how those individual impacts might combine or synergistically interact with each other to affect the [] environment. As a result, they do not satisfy the requirements of the NEPA.”) Finally, cumulative analysis must be done as early in the environmental review process as possible, it is not appropriate to “defer consideration of cumulative impacts to a future date. ‘NEPA requires consideration of the potential impacts of an action *before* the action takes place.’” *Neighbors*, 137 F.3d at 1380 *quoting City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990) (emphasis in original).

The NEPA regulations also require that indirect effects including changes to land use patterns and induced growth be analyzed. “Indirect effects,” include those that “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include *growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.*” 40 C.F.R. s.1508.8(b) (emphasis added). *See TOMAC v. Norton*, 240 F. Supp.2d 45, 50-52 (D.D.C. 2003) (finding NEPA review lacking where the agency failed to address secondary growth as it pertained to impacts to groundwater, prime farmland, floodplains and stormwater run-off, wetlands and

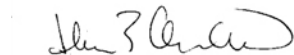
wildlife and vegetation); *Friends of the Earth v. United States Army Corps of Eng'rs*, 109 F. Supp.2d 30, 43 (D.D.C. 2000) (finding NEPA required analysis of inevitable secondary development that would result from casinos, and the agency failed to adequately consider the cumulative impact of casino construction in the area); *see also Mullin v. Skinner*, 756 F. Supp. 904, 925 (E.D.N.C. 1990) (Agency enjoined from proceeding with bridge project which induced growth in island community until it prepared an adequate EIS identifying and discussing in detail the direct, indirect, and cumulative impacts of and alternatives to the proposed Project); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (requiring agency to prepare an EIS on effects of proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create).

The DEIS/R failed to include an analysis of the growth inducing cumulative impacts from this project.

Conclusion

The DEIS/R is inadequate because it omits important information regarding potentially significant impacts especially to California condor, golden eagles, and other rare and unique biological species and resources, fails to consider a range of alternatives that will avoid the impacts to sensitive biological resources. The Center urges the BLM and Kern County to revise the environmental review documents and provide a supplemental DEIS/R that addresses all of the inadequacies detailed in our letter above. Please feel free to contact me with any questions.

Sincerely,



Ilene Anderson
Biologist/Public Lands Desert Director
Center for Biological Diversity

cc: via email

Diane Noda, FWS, diane_noda@fws.gov

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September 26, 2012

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Bureau of Land Management
California Desert District
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22835 Calle San Juan de Los Lagos
Moreno Valley, CA 92553
via email: jchilders@blm.gov

Dear Ms. Kitchen and Mr. Childers:

On behalf of Audubon California, Defenders of Wildlife and Sierra Club with a combined total of over 300,000 members we thank you for the opportunity to submit our comments on the joint

Draft Environmental Impact Report (DEIR) and Draft Environmental Statement (DEIS) for the Alta East Wind Energy Project.

In recognition of the growing threats to human and ecological communities presented by the release of greenhouse gases and the resultant climate change, **Audubon** has championed the aggressive development of both energy conservation and renewable energy generation to reduce those threats. In locations throughout our state Audubon at the state level, and our chapters at a local level, have successfully collaborated on the development of renewable energy facilities—striking a balance between landscape conservation priorities and renewable energy.

Defenders of Wildlife (“Defenders”) has more than 1 million members nationwide with more than 170,000 members and supporters in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, we employ science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The Sierra Club is a national nonprofit organization of approximately 1.3 million members and supporters (approximately 250,000 of whom live in California) dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth’s ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club’s concerns encompass protecting our

public lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to reduce global warming.

Our groups have ongoing concerns regarding the cumulative impacts of wind energy development in the Southern Sierra on sensitive species (particularly avian species), and believe there are numerous improvements in the avoidance, minimization and mitigation measures that need to be incorporated into a revised EIR/EIS to reduce the impacts to species. The County and BLM's goals need to be to reduce the impacts to a less than significant level, and adoption of our recommendations/requests will help achieve that goal, if possible.

As the County is aware, CEQA serves "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." (*Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal. 3d 376, 392.) If CEQA is "scrupulously followed," the public will know the basis for the agency's action and "being duly informed, can respond accordingly to action with which it disagrees." (*Id.*) Thus, CEQA "protects not only the environment but also informed self-government." (*Id.*) The environmental review documents must "contain facts and analysis, not just the agency's bare conclusions or opinions." (*Laurel Heights Improvement Assn. v. Regents* (1989) 47 Cal. 3d 376, 404 [and cases cited therein].) The environmental review documents "must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (*Id.*)

Our comments are presented in a new format – a spread sheet – that incorporates

- the text from the DEIR
- the location in the DEIR
- our comment
- our recommendation

We hope you find this template useful. We believe there are numerous improvements in the avoidance, minimization and mitigation measures that need to be incorporated into a revised EIR to reduce the impacts to species. The County's goals need to be to reduce the impacts to a less than significant level, and adoption of our recommendations/requests will help achieve that goal, if possible.

Sincerely,

A handwritten signature in black ink, appearing to read "Garry George", followed by a horizontal line.

Garry George
Renewable Energy Project Director
AUDUBON CALIFORNIA

A handwritten signature in black ink, appearing to read "Stephanie Dashiell".

Stephanie Dashiell
California Desert Associate
Defenders of Wildlife

A handwritten signature in black ink, appearing to read "Sarah K. Friedman".

Sarah K. Friedman
Senior Campaign Representative
Beyond Coal Campaign – Sierra Club

| Comment# | Statement | Location | Comment | Recommendation |
|----------|--|----------------|--|--|
| 1 | In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. | DEIR/DEIS 2-25 | Of all the alternatives, Audubon supports this NEPA alternative | |
| 2 | Among the other AEWP alternatives, Kern County has identified Alternative C, Reduced Project North as the environmentally superior alternative because it would: | DEIR/DEIS 2-25 | Of all the alternatives, Audubon supports this CEQA alternative | |
| 3 | GENERAL | | We note and thank the proponent for the amount of effort, detail, analysis and presentation of documentation of wildlife usage of the site that accompanies this document. The multiple Appendices, copy of the Avian Bat Protection Plan (now called Bird Bat Conservation Strategy) and Eagle Conservation Plan have all been prepared in advance to inform the design of the project and in adherence to federal Land-based Wind Turbine guidelines. | Include a requirement in future wind energy applications in Kern County and BLM to meet this level of effort. |
| 4 | GENERAL | | The DEIR fails to address issues of habitat fragmentation from the proposed project. While it references USFWS' Land-Based Wind Energy Guidelines (WEG)[1], it does not apply the guidance in the impact analysis. For example, the DEIR does not identify, much less analyze the impacts to fragmentation-sensitive species (WEG at 12) that occur on the proposed project site. It fails to analyze the large-scale fragmentation of habitat (WEG at 12) for rare and common species that has occurred in the area and how the further fragmentation by the proposed project will impact ecological processes and crucial connectivity. These fragmentation issues are only the first tier of guidelines that remain unaddressed in the DEIR, however, without these most basic issues identified and analyzed, the DEIR fails to comply with the WEG on this issues. We recognize that WEG are voluntary, however, the methodology presented in the WEG is extremely useful in evaluating the impacts from the proposed project on the habitat in the CEQA review process[1] www.fws.gov/windenergy/docs/WEG_final.pdf . EnXco has publicly stated that they will follow the guidelines (see attached letter to Secretary Salazar) | Use the WEG guidelines to evaluate the habitat fragmentation impacts from the proposed project, and the guidance for minimizing and mitigating residual impacts. |

| | | | |
|--|--------------------------------|--|---|
| 5 Raptor and other avian baseline and risk analysis in Appendices D-3,4,5,6,7,8 | DEIS/DEIS Appendix D | These documents are confusing as a baseline description of the avian use of the site. The documents are filled with subjective statistical analysis that compares the site to other unnamed sites in other parts of the country, fails to describe the methodology used for choosing other sites to compare, and the relevancy of the analysis in assessing risk or establishing a baseline for purposes of CEQA or for purposes of comparison to post-construction monitoring. | Compare raptor use to other projects in the Tehachapis, including Pine Tree Wind Project, rather than comparing data from unnamed sites in unnamed locations for comparisons or risk assessment. Methodology for choosing the sample sites should be included in the analysis. Additionally, Ferrer et al in Weak Relationship between risk assessment studies and recorded mortality in wind farms , Journal of Applied Ecology, 2011: There was no clear relationship between predicted risk and the actual recorded bird mortality at wind farms. Risk assessment studies incorrectly assumed a linear relationship between frequency of observed birds and fatalities. Nevertheless, it is known that bird mortality in wind farms is related to physical characteristics around individual wind turbines. However, EIAs are usually conducted at the scale of the entire wind farm. The correlation between predicted mortality and actual mortality must be improved in future risk assessment studies by changing the scale of these studies to focus on the locations of proposed individual wind turbine sites and working on a species specific level. Proponent should characterize habitat and usage per planned turbine rather than sectors or the entire site. |
| 6 A qualitative comparison of mapped flight paths across survey points indicate higher use for some raptor species (buteos, eagles, and falcons) at points four, five, and six, in the areas of greater topographic relief | DEIS/DEIR, Appendix D-3, p. 9 | This would suggest further evaluation of turbine design in areas four, five and six. | Reevaluate the project design for these areas, and prioritize monitoring in these areas. Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impacts comparisons and comparison across projects. |
| 7 Using mortality data collected during a 10-year period from wind-energy facilities throughout the entire United States, the average number of bird collision fatalities is 3.1 per megawatt (MW) per year, or 2.3 fatalities per turbine per year (NWCC 2004). | DEIS/DEIR, Appendix D-3, p. 11 | Pine Tree is 11.8 per megawatt (MW) per year in the Tehachapis. This would be a more scientific comparison and shows a higher risk in this area. | Use a risk adverse analysis or use these mortality averages as thresholds in the BBCS. Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impact comparisons and comparison across projects. |
| 8 The SCWRA does not appear to provide important stopover habitat for migrant songbirds based on the results of the fixed point bird use surveys. | | This analysis is inadequate. Birds may fly through the SCWRA RSA on ascent or descent to stopover habitat nearby. <i>Most songbirds, waterfowl, shorebirds, herons, and egrets migrate at night (Kerlinger and Moore, 1989). Nocturnal migrants generally take off after sunset, ascend to their cruising altitude between 300 and 2,000 feet (90–610 meters), and return to land before sunrise (Kerlinger, 1995). For most of their flight, songbirds and other nocturnal migrants are above the reach of wind turbines, but they pass through the altitudinal range of wind turbines during ascents and descents and may also fly closer to the ground during inclement weather or when negotiating mountain passes (Able, 1970; Richardson, 2000).</i> | Conduct a more thorough analysis of nocturnal migration through the project area using radar. |
| 9 Bird types most often observed flying within the turbine rotor-swept height were vultures (58.3%) and raptors (23.1%). | DEIR/DEIS D3- p.i | Passerines (songbirds) have been the most abundant avian fatality at wind farms outside California, often comprising more than 80% of total avian fatalities (Erickson et al. 2001a). Also, Pine Tree Wind Project mortality report shows that. <i>The vast majority of bird fatalities were migrant and resident passerine birds.(citation: The Pine Tree Mortality report).</i> | Conduct a more thorough analysis of nocturnal migration through the project area using radar. |

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| 10 Due to the fact that very few nonraptor species were observed in the rotor swept area (RSA), and no nonraptor USFWS designated Birds of Conservation Concern species were observed in the RSA, it is extremely unlikely that non-raptor populations will be adversely affected by direct mortality from the operation of the wind energy facility. | ABB | This conclusion is not supported by evidence. See above. | Nocturnal studies were not conducted. Either conduct nocturnal studies or remove this conclusion |
| 11 The low levels of documented use by all bird species suggest that bird density is very low and migration corridors or stopover habitat are not present onsite. | ABB | This conclusion needs to be supported by evidence of how birds use the site at night. | Same as above |
| 12 Nighttime visibility data available for the area suggest that risk of nocturnal avian fatality during migration is low because of infrequent low visibility events that are associated with bird strike risk. | ABB | This conclusion is not supported by evidence that nocturnal avian fatality in California during migration is caused by low visibility events. | Remove this conclusion or support it with evidence that nocturnal avian fatality in California is caused by low visibility events. |
| 13 AWD is not aware of any significant fatality events involving nocturnal migrants in the region. | ABB | What is the definition of "significant" used here? | See Pine Tree Wind Project Monitoring Report |
| 14 To ensure that impacts on avian species do not reach levels of significance during project operation or result in a net loss of avian species in the regional population, study results will be provided to USFWS on an annual basis. | ABB | This statement is unclear. | Please define standard of "significance" used here. |
| 15 GENERAL on ABB | ABB | ABB has no thresholds of mortality or disturbance to generate adaptive management or operational changes | Thresholds of mortality should trigger adaptive management or operational changes |
| 16 Alta East differs from this wind resource area in that it has few perches and potentially low small mammal and prey resource densities. | ABB | No prey base studies were done so how can this conclusion be supported? | Conduct prey base study or remove this statement. |
| 17 Although project prey studies were not done, the project area generally consists of habitats typically not selected by golden eagles. | ECP | This conclusion is unsupported by evidence. | No prey base studies were done so how can this conclusion be supported? |
| 18 It is generally understood that nonbreeding eagles use areas on the margins of territories occupied by breeding adults (Watson, 1997; Hunt, 1998; Caro et al., 2010). These "floaters" have been shown to be more vulnerable to collision with turbine blades at wind energy projects than locally breeding adults and juveniles are (Hunt et al., 1999 and 2002); however, Hunt (2002) associates this risk with hunting of live prey behavior, which was not observed and is not common based on the data collected for the project. | ECP | This conclusion is unsupported by evidence. | No prey base studies were done so how can this conclusion be supported? |
| 19 Potential for seasonal variability in use of the project area exists, and data indicate that the project is likely more attractive to eagles in the fall and winter than during other times of the year. | ECP | ECP should provide for a threshold of Eagle mortality that will trigger a seasonal shutdown in fall or winter. (see following comment). | |
| 20 Golden eagle use accounted for approximately 22.2 percent of the observed raptor use at the AEWRA during the two years of study; therefore, assuming the proportion of eagles observed is related to the proportion of eagle mortality that would be expected, an eagle mortality rate of 0.0022 eagles/MW/year (0.0066 eagles/turbine/year), or 0.700 eagle fatalities per year, would be estimated for the proposed 318-MW wind energy project. Using this prediction, project-wide eagle mortality would be approximately three to four eagles every five years | ECP | 1.) Three to four eagles every five years contradicts earlier predictions of low Eagle mortality and the assessment of the site as Category 3. 2.) | Thresholds for Eagles should be set at this predicted level or an adjusted level that corresponds to proponents earlier prediction |

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| 21 This regression analysis currently one means of predicting raptor fatality, and AWD cannot identify any specific behaviors or risk factors that would cause the eagles present on the project to be at risk of collision fatality (see Table 3); therefore, eagle fatality would be predicted to be zero for the project using this method and AWD concludes that take of eagles is highly unlikely during operation. | ECP | This is contradictory to above. | We recommend using this conclusion as a threshold for the ECP. |
| 22 AWD will provide BLM and USFWS with the results of the mortality study for eagles annually. A qualified biologist will conduct mortality monitoring using a statistically significant sample size of operational turbines within the project area, not to exceed 33 percent of the WTGs. Depending on the results of the monitoring, more or fewer turbines may be monitored each subsequent year of study. | ECP | | The documents have identified turbine areas where Eagles have been seen the most as areas 4,5,6. Turbines in those areas should be prioritized for monitoring if only 33% of the turbines are monitored. |
| 23 AWD or its representative will conduct post-construction breeding monitoring of eagle territories within 10 miles of the project in the first and third years following the project's initial operation. Post-construction breeding monitoring will include aerial surveys completed in accordance with the USFWS 2010 Inventory and Monitoring Protocol recommendations (Pagel et al., 2010). Survey results will be provided annually to BLM and USFWS. | ECP | We are concerned about the impacts such as disturbance of frequent and numerous helicopter surveys in the Tehachapi Mtns. | These surveys should be coordinated among developers in the Tehachapis and minimized. |
| 24 Mitigation Measure 4.17-1.... all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1. Permanent impacts would be mitigated through one or more of the following: acquisition and conservation of off-site lands; onsite restoration, enhancement, and management of disturbed areas not impacted by the AEWP; or mitigation banking. | MM 4.17-1 | This mitigation measure is inadequate to reduce impacts on Desert Tortoise. | We encourage the applicant to acquire off-site desert tortoise habitat in the ration of 1:1 for all permanently impacted desert tortoise habitat on the project site. |
| 25 Desert Tortoise: Four (4) adult tortoises and one (1) juvenile were found on the site, as well as 28 burrows, 1 shell-skeletal remains, and 40 scat events (Sundance, 2009). | 3.21-20 (Wildlife Resources) | | We recommend the applicant develop a home range buffer around active burrows in order to maintain and conserve the small desert tortoise population on-site over the life of the project. The applicant should make every attempt to leave desert tortoise habitat intact and avoid desert tortoise active burrows. |
| 26 Mitigation Measure 4.2.1-3(e) "Impacts to burrowing owl territories shall be mitigated through a combination of off-site habitat ompensation and/or off-site restoration of disturbed habitat capable of supporting the species." "The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game." | MM 4.2.1-3(e) | This mitigation measure is inadequate to reduce impacts on Burrowing owl to less than significant. | We recommend the applicant to mitigate for impacts to burrowing owl territories through habitat compensation placed in conservation easements in perpetuity and managed for the conservation of the burrowing owl. Burrowing Owl mitigation lands should not coincide with off-site mitigation lands for conservation of sensitive vegetation communities. |

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| 27 | MM 4.21-6. Avian and Bat Protection Plan. Section 6.4 states that "Mortality predictions and avian and bat risk assessments performed in the permitting process will be used in conjunction with any agency requirements among other factors including but not limited to economic considerations to determine if adaptive management is necessary." | MM 4.21-6/Appendix D-29 | Assessments in the permitting stage are often insufficient indicators of avian mortality during project operations. | We encourage a robust adaptive monitoring and management strategy with conservation measures including seasonal curtailment, curtailment in response to specific events, decommissioning and/or relocation of specific turbines when mortality thresholds are met, and other measures if/when proven effective by wildlife agencies. Monitoring Protocol and data should be standardized across all wind projects in the Tehachapis, for cumulative impact comparisons and comparison across projects. |
| 28 | MM 4.21-7. Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles. Section 2.5.1. Fatality Studies--describe that fatality studies will occur at years 1, 3 and 5 of the project to demonstrate that "the level of incidental injury and mortality does not result in unanticipated long-term decline in populations of eagle in that region. Monitoring would be ceased, explained or continued in response to the data collected." Section 3.0 "Adaptive Management" is incomplete. | MM 4.21-7/Appendix D-30 | This mitigation measure is inadequate to reduce the impacts on Golden Eagle to less than significant. | We recommend that fatality studies occur for the life of the project. Unanticipated long-term effects on eagle in the region is overly broad and may be difficult to prove. A more appropriate metric would be eagle fatalities at the project site, as discussed above. Section 3.0 should include specific corrective actions triggered by specific take thresholds. Adaptive management measures should include: seasonal curtailment, curtailment in response to specific events, decommissioning and/or relocation of specific turbines when mortality thresholds are met, and other measures if/when proven effective by USFWS. Given the large number of wind projects under development by the applicant in the TWRA, and the cumulative impacts of this wind development, we also recommend that AWD prepare a comprehensive Golden Eagle Mitigation strategy for its projects in the Tehachapis similar to its California Condor Mitigation Strategy. |
| 29 | Adaptive Management | Section 3.0 | This section on "Adaptive Management" is incomplete. | Complete this section |
| 30 | Swainson's Hawk | DEIR/DEIS, D-13,14 | This data and analysis are inadequate to reduce impacts to Swainson's Hawk to less than significant | Proponent should also conduct survey of foraging habitat that will be removed by project construction and transmission infrastructure. Foraging habitat including agricultural lands for nesting pairs of Swainson's Hawk in the Antelope Valley is protected and must be mitigated. California Department of Fish & Game can share a map of known nests in the Antelope Valley. Mitigation measures are in the attached document. |

Swainson's Hawk
Survey Protocols, Impact Avoidance, and Minimization Measures
for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern
Counties, California

State of California
California Energy Commission and Department of Fish and Game
June 2, 2010

Swainson's Hawk Background Information

The Swainson's hawk (*Buteo swainsoni*) is listed as a California state threatened species under the California Endangered Species Act (CESA). The species is not listed as threatened or endangered under the federal Endangered Species Act. To comply with state wildlife protection requirements and receive project approvals, renewable energy project developers proposing projects in the Desert Renewable Energy Conservation Plan (DRECP) area may be required to conduct surveys and avoid or minimize impacts to Swainson's hawks and related nesting and foraging habitat. The survey protocols and mitigation and monitoring plan recommendations provided below suggest approaches and measures for complying with protection requirements.

Antelope Valley Swainson's hawks are known to have historically nested in Joshua tree woodlands and foraged in grasslands and native desert scrub communities. Currently, they nest in Joshua tree woodlands, ornamental roadside trees, and windrow or perimeter trees in active and historical agricultural areas. Foraging habitat includes dry land and irrigated pasture, alfalfa, fallow fields, low-growing row or field crops, new orchards, and cereal grain crops. Swainson's hawks may also forage in grasslands, Joshua tree woodlands, and other desert scrub habitats that support a suitable prey base. Gophers dominate the prey base of agriculturally based pairs while Swainson's hawks nesting in natural desert habitats consume a wider variety of prey species. While California's Central Valley Swainson's hawk population winters in Mexico, Central America South America, and a small percentage in the Central Valley, the migration habits of the Antelope Valley population are unknown. Recent observations suggest that they may arrive in nesting territories generally later than the Central Valley Population (Pete Bloom, raptor biologist, personal communication).

Environmental Review Considerations

The California Environmental Quality Act (CEQA), Warren-Alquist Act and implementing regulations, and CESA require consideration of direct, indirect, temporary, permanent, individual project, and cumulative impacts. CEQA allows approval of projects with significant effects when measures have been included to avoid or mitigate those effects, or specific considerations make such measures infeasible and specific benefits outweigh the significant effects. (CEQA Guidelines §21081). CESA regulates the

taking of state-listed species. "Take" is defined as to "hunt, pursue, catch, capture, or kill, or to attempt to hunt, pursue, catch, capture, or kill." (Fish and Game Code §86). Incidental take authorization requires that all impacts to the species are minimized and fully mitigated and that mitigation is roughly proportional to the extent of the impacts of the taking. (14CCR § 783.4). This "full mitigation" standard is intended to ensure that the status of the species is the same or better after project and mitigation implementation as it was prior to project implementation.

Renewable energy project development could cause direct, indirect, individual, and cumulative adverse impacts to Swainson's hawks when facility construction and operation areas (such as wind turbines, power plants, solar panels and tower sites, access roads, staging areas, and pulling/splicing locations) occur in areas where hawks are present. Potential impacts include loss of foraging habitat and disruption of breeding activities due to increased dust, noise, and human presence. Direct mortality from vehicle strikes and collisions with wind turbines is also known to occur. Construction disturbance during the breeding season and habitat loss could cause incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

The current land uses in the Antelope Valley area support approximately 10 breeding pairs. This area comprises the southernmost edge of the known breeding range for this species in California. The small number of breeding Swainson's hawks in the Antelope Valley and the potential isolation from other Swainson's hawk populations makes the Antelope Valley population particularly susceptible to extirpation. Swainson's hawks have high nest site fidelity, meaning they return to the same site year after year (Estep 1989, Woodbridge et al. 1995). This may limit exchange of individual birds between distant breeding groups (Hull et al. 2007). Hull et al. (2007) found evidence suggesting that the Central Valley population has had little recent genetic exchange with other populations east of the Sierra Nevada. Due to the geographical isolation of the Antelope Valley Swainson's hawk population from other breeding populations, together with the species' high site fidelity, it is reasonable to infer that rapid re-colonization of the Antelope Valley would be unlikely if nesting pairs were lost. Given these facts, the California Department of Fish and Game (Department) would consider impacts to breeding pairs to be potentially significant because they may cause the population to become less than self-sustaining.

A substantial reduction in numbers or habitat of a rare, threatened, or endangered species would be considered a significant impact under CEQA. Potentially significant impacts may result from activities that cause nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), or direct mortality. Due to the Swainson's hawk's known preference for areas of low vegetation that support abundant prey, such as grasslands or alfalfa fields (Bechard 1982, Babcock 1995), the Department considers conversion of foraging areas to renewable energy power plant facility sites to be habitat loss. For example, solar panel arrays are expected to eliminate most or all foraging potential. Significant habitat loss may result from individual projects and cumulatively, from multiple projects. Each

project which contributes to a significant cumulative effect must offset its contribution to that effect in order to determine that the cumulative impacts have been avoided.

The Department considers a nest site to be active if it was used at least once during the past 5 years. Impacts to suitable habitat or individual birds within a five-mile radius of an active nest will be considered significant and to have the potential to “take” Swainson’s hawks as that term is defined in §86 of the Fish and Game Code. Please consult with the Department when determining whether “take” authorization is warranted for a specific project.

Special Considerations for Wind Energy Development

Wind turbines present an additional, continuous, long-term risk of Swainson’s hawk take throughout the life of a project. This continuous risk is not always considered in the environmental analyses for other types of projects that may have limited short-term impacts (e.g. construction related impacts). It has been documented elsewhere in California that Swainson’s hawks are killed by wind turbines. Turbine strikes could occur during migration or during the nesting season. Swainson’s hawk surveys for wind energy development should follow the same methods as for solar energy projects, described below, but the impacts analysis and corresponding mitigation should consider the additional continuous long-term risk of turbine-related fatalities. Habitat impact analysis should consider both the ground surface area and the air space that is used by Swainson’s hawks. The mitigation methods described below are specific to ground surface impacts. Wind energy development project proponents should consult with the Department to develop avoidance measures and mitigation specific for the loss of air space and the potential for on-going take of Swainson’s hawk during project operations.” For additional avian considerations that are applicable to Swainson’s hawk, please refer to the “California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development” (California Energy Commission and California Department of Fish and Game 2007). The guidelines can be found at <http://www.energy.ca.gov/windguidelines/index.html>.

Survey Protocol

The following survey protocols and monitoring/mitigation recommendations suggest surveys and acquisition of mitigation lands prior to construction of the project if nests are found within five miles of a project site. Before conducting surveys for a particular project, project developers are encouraged to contact the Department and the appropriate lead agencies for up-to-date, site-specific issues and possible refinement of the following survey protocols and monitoring/mitigation recommendations. Survey methods may be flexible depending on surveyor experience and/or already-known nesting status for a given site. Please contact the Department (Region 4 for Kern County and Region 5 for Los Angeles County) to use an alternate survey plan from that suggested within this document.

A qualified raptor biologist with Swainson's hawk survey experience, approved by the Department and the appropriate lead agency, should conduct surveys in a manner that maximizes the potential to observe the adult Swainson's hawks and the nest/chicks via visual and audible cues within a five-mile radius of the project. All potential nest trees within the five-mile radius shall be surveyed for presence of nests. Surveys should be conducted prior to environmental analysis. Surveys should be repeated within the 5-mile radius if a survey season ensues or elapses before the onset of project related activities. If construction begins mid-survey season the year after the initial surveys, then the surveys should continue for that part of the season before construction.

Examples of suitable habitats are Joshua tree woodlands, grasslands, desert scrub communities, and agricultural lands (such as alfalfa, fallow fields, beet, tomato, onions, and other low-growing row or field crops, dry-land and irrigated pasture, cereal grain crops [including corn after harvest], and new orchards). Consult with the Department when determining whether the project site is within five miles of already-known nest sites. If hawks or known nest sites are found within the five-mile radius, consult with the Department and the appropriate lead agency for follow-up to the surveys.

Minimum Equipment

Minimum survey equipment includes a high-quality pair of binoculars and a high quality spotting scope. Surveying even the smallest project area will take hours, and poor optics often result in eye-strain and difficulty distinguishing details in vegetation and subject birds. Other equipment includes good maps, GPS units, flagging, and notebooks.

Walking vs Driving

Driving or "windshield surveys" are usually preferred to walking if an adequate roadway is available through or around the project site. While driving, the observer can typically make a closer approach to a hawk without causing the bird to fly. Although it might appear that a flying bird is more visible, they often fly away from the observer using trees as screens; and it is difficult to determine from where a flying bird originated. Walking surveys are useful in locating a nest after a nest territory is identified, or when driving is not an option.

Angle and Distance to the Tree

Surveying subject trees from multiple angles will greatly increase the observer's chance of detecting a nest or hawk, especially after trees are fully leafed and when surveying multiple trees in close proximity. When surveying from an access road, survey in both directions. Maintaining a distance of 50 meters to 200 meters from subject trees is optimal for observing perched and flying hawks without greatly reducing the chance of detecting a nest/young. Once a nesting territory is identified, a closer inspection may be required to locate the nest.

Speed

Travel at a speed that allows for a thorough inspection of a potential nest site. Survey speeds should not exceed 5 miles per hour to the greatest extent possible. Stop frequently to scan subject trees with binoculars and a spotting scope.

Visual and Audible Cues

Focus surveys on both observations and vocalizations. Observations of nests, perched adults, displaying adults, and chicks during the nesting season are all indicators of nesting Swainson's hawks. In addition, vocalizations are extremely helpful in locating nesting territories. Vocal communication between hawks is frequent (1) during territorial displays, (2) during courtship and mating, (3) through the nesting period as mates notify each other that food is available or that a threat exists, (4) and as older chicks and fledglings beg for food.

Distractions

Minimize distractions while surveying. Although two pairs of eyes may be better than one pair at times, conversation may limit focus. Radios should be off, not only are they distracting, they may cover a hawk's call.

Notes and Species Observed

Take thorough field notes. Detailed notes and maps of the location of observed Swainson's hawk nests are essential for filling gaps in the California Natural Diversity Data Base; please note all observed nest sites, including date and time of observation, location name, UTM coordinates, number of young, and any behavioral observations. Also document the occurrence of nesting great horned owls, red-tailed hawks, red-shouldered hawks and other potentially competitive species. These species will infrequently nest within 100 yards of each other, so the presence of one species will not necessarily exclude another.

Timing

To meet *the minimum level* of protection for the species, surveys should be completed for *at least* the two survey periods immediately prior to a project's initiation. For example, if a project is scheduled to begin on June 1, you should complete three surveys in Period II and three surveys in Period III. However, it is always recommended that surveys be completed in Periods II, III, and IV prior to environmental review.

Survey Period I

Survey dates: January-March 31 (optional but recommended; pre-arrival)

Survey Time: All day

Number of Surveys: 1

Justification and search image: Prior to Swainson's hawks arrival from wintering grounds, it is very helpful to survey the project area to determine potential nest locations. Most nests are easily observed from relatively long distances, giving the surveyor the opportunity to identify potential nest sites, as well as becoming familiar with the project area. It also gives the surveyor the opportunity to locate and map competing species nest sites such as great horned owls from February on, and red-tailed hawks

from March on. After March 1, surveyors may observe Swainson's hawks staging in traditional nest territories.

Survey Period II

Survey dates: April 1 – April 30 (arrival; nest building)

Survey Time: All day

Number of Surveys: 3

Justification and search image: Most Antelope Valley Swainson's hawks return by April 1, and immediately begin occupying their traditional nest territories. For those few that do not return by April 1, there are often hawks ("floaters") that act as place-holders in traditional nest sites; they are birds that do not have mates, but temporarily attach themselves to traditional territories and/or one of the site's "owners." Floaters are usually displaced by the territories' owner(s) if the owner returns. Most trees are leafless and are relatively transparent; it is easy to observe old nests, staging birds, and competing species. The hawks are usually in their territories during the survey hours, but typically soaring and foraging in the mid-day hours. Swainson's hawks may often be observed involved in territorial and courtship displays, and circling the nest territory. Potential nest sites identified by the observation of staging Swainson's hawks will usually be active territories during that season, although the pair may not successfully nest/reproduce that year. Both males and females are actively nest building, visiting their selected site frequently. Later in this survey period, territorial and courtship displays are increased, as is copulation. The birds tend to vocalize often, and nest locations are most easily identified. This period may require a great deal of "sit and watch" surveying.

Survey Period III

Survey dates: May 1 – May 30 (egg laying; incubation)

Survey Time: daylight hours, as needed to monitor known nest sites only

Number of Surveys: 3

Justification and search image: Nests are extremely difficult to locate this time of year, and even the most experienced surveyor may miss them, especially if the previous surveys have not been done. During this phase of nesting, the female Swainson's hawk is in brood position, very low in the nest, laying eggs, incubating, or protecting the newly hatched and vulnerable chicks; her head may or may not be visible. Nests are often well-hidden, built into heavily vegetated sections of trees or in clumps of mistletoe, making them all but invisible. Trees are usually not viewable from all angles, which may make nest observation impossible. Following the male to the nest may be the only method to locate it, and the male will spend hours away from the nest foraging, soaring, and will generally avoid drawing attention to the nest site. Even if the observer is fortunate enough to see a male returning with food for the female, if the female determines it is not safe she will not call the male in, and he will not approach the nest; this may happen if the observer, or others, are too close to the nest or if other threats, such as rival hawks, are apparent to the female or male.

Survey Period IV

Survey dates: June 1 – July 15 (fledging)

Survey Time: Sunrise to 1200, 1600 to sunset

Number of Surveys: 3

Justification and search image: Young are active and visible, and relatively safe without parental protection. Both adults make numerous trips to the nest and are often soaring above, or perched near or on the nest tree. The location and construction of the nest may still limit visibility of the nest, young, and adults.

Reporting

Provide the Department and the appropriate lead agency with pre-construction survey results in a written report, within 30 days prior to commencement of construction activities. Report should include date of the report, authors and affiliations, contact information, introduction, methods, study location (include map), results, discussion, and literature cited. For surveys intended to support environmental impact analyses prior to project approval, provide the Department and the lead agency with written survey reports within 30 days of survey completion. Submit California Natural Diversity Database (CNDDDB) forms for any listed, fully protected, or species of special concern countered and positively identified. CNDDDB forms may be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf.

Monitoring and Mitigation Plan Recommendations

1. If surveys locate a nest site, prepare a Swainson's hawk Monitoring and Mitigation Plan in consultation with the Department and the appropriate lead agency. Plans should be prepared by a qualified biologist approved by the Department and the appropriate lead agency. Include in the plans detailed measures to avoid and minimize impacts to Swainson's hawks in and near the construction areas. For example:
 - a. If a nest site is found, design the project to allow sufficient foraging and fledging area to maintain the nest site.
 - b. During the nesting season, ensure no new disturbances, habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging occur within 1/2 mile of an active nest between March 1 and September 15. Buffer zones may be adjusted in consultation with the Department and the lead agency.
 - c. Do not remove Swainson's hawk nest trees unless avoidance measures are determined to be infeasible. Removal of such trees should occur only during the timeframe of October 1 and the last day in February.

2. Monitoring plans should include measures for injured Swainson's hawks:
 - a. For hawks found injured during project-related activities on the project site, plans should call for immediate relocation to a raptor recovery center approved by a Department regional representative.
 - b. A system should be set-up so that costs associated with the care or treatment of such injured Swainson's hawks will be borne by the project developer.
 - c. Include appropriate contact information for immediate notification of the Department and the appropriate lead agency of a hawk injury incident. Have approved procedures in place to notify the Department and the lead agency outside normal business hours. Notify the appropriate personnel via telephone or email, followed by a written incident report. Include the date, time, location, and circumstances of the incident in the reports.
3. Mitigation plans should focus on providing habitat management (HM) lands. Lands which are currently in urban use or lands that have no existing or potential value for foraging Swainson's hawks will not require mitigation nor would they be suitable for mitigation. The plans should call for mitigating loss of Swainson's hawk foraging habitat by providing HM lands within the Antelope Valley Swainson's hawk breeding range at a minimum 2:1 ratio for such habitat impacted within a five-mile radius of active Swainson's hawk nest(s). The Department considers a nest active if it was used one or more times within the last 5 years.

Project developers may consider delegating responsibilities for acquisition and management of the HM lands to the Department or a third party, such as a non-governmental organization dedicated to Mojave Desert habitat conservation. Seek approval of such delegations from the Department and the appropriate lead agency.

Approaches for acquisition and management of HM lands:

- a. HM Land Selection Criteria. Identify the region within which lands would be acquired, and the type/quality of habitat to be acquired. Foraging habitat should be moderate to good with a capacity to improve in quality and value to Swainson's hawks, and must be within the Antelope Valley Swainson's hawk breeding range. Foraging habitat with suitable nest trees is preferred.
- b. Review and Approval of HM Lands Prior to Acquisition. Provide an acquisition proposal to the Department and the appropriate lead agency for their approval at least 3 months before acquiring the property. The proposal should discuss the suitability of the property by comparing it to the selection criteria.
- c. Land Acquisition Schedule and Financial Assurances. Complete acquisition of proposed HM lands before initiating ground-disturbing project activities. If an irrevocable letter of credit or other form of security is provided, complete land acquisition within 12 months prior to beginning ground-disturbing project

activities. Provide financial assurances for dedicating adequate funding for impact avoidance, minimization and compensation measures required for project approval (see 3. d. below).

- d. HM Lands Acquisition. Be prepared to provide a preliminary title report, initial hazardous materials survey report, biological analysis, at a minimum to the Department and the appropriate lead agency. The information will likely also be reviewed by the California Department of General Services, Fish and Game Commission and/or Wildlife Conservation Board.

Fee title or conservation easement will likely be transferred to a Department of Fish and Game-approved non-profit third party and the Department, or solely to the Department. Be prepared to support enhancement and endowment funds for protection and enhancement of acquired lands. The Department will approve establishment and management of the funds, ensuring that qualified non-profit organizations or the Department will manage the funds in an appropriate manner. Contributed funds and any related interest generated from the initial capital endowment would support long-term operation, management, and protection of the approved HM lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the HM lands. Be prepared to reimburse the Department or other entities for all land acquisition costs.

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Estep, J.A. 1989. Biology, movements, and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986–87. California Department of Fish and Game, Nongame Bird and Mammal Section Report.

Woodbridge B, Finley KK, Bloom PH. 1995. Reproductive performance, age structure, and natal dispersal of Swainson's Hawks in the Butte Valley, California. *Journal of Raptor Research* 29:187–192.



"PROTECTING OUR GREAT NATIONAL HERITAGE"

THE KERN AUDUBON SOCIETY

P. O. Box 3581 Bakersfield, CA 93385

August 22, 2012

Kern County Planning and Community Development Department
2700 M Street, Suite 100
Bakersfield, CA 93301

RE: DEIR of the Alta East Wind Project

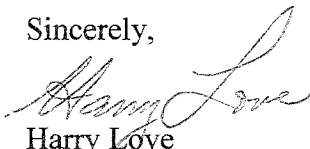
Dear Jacqui Kitchen:

In regards to the alternatives presented in the DEIR for this project, the Kern Audubon Society recommends that *Alternative C and Alternative D be merged into one alternative.*

First, we strongly support the exclusion of the portion of the proposed project north of state route 58 because of a high potential for mortality collisions by golden eagles and California condors. This exclusion has another effect, that of enhancing the visual quality by drivers of highway 58. Second, we also believe that the portion of Alternative D that eliminates WTs in the area currently used for grazing is important in reducing the potential impacts by condors. Condors forage looking for dead animal carcasses. A primary and historical food supply is cattle. The combination of alternatives would result in a highly effective and environmentally friendly choice.

We look forward to the FEIR reflecting this proposal.

Sincerely,


Harry Love
Conservation Chair



September 26, 2012

Lorelei H. Oviatt
Kern County, CA AICP Director
2700 "M" Street,, Suite 100
Bakersfield, CA 93301-2323

To Whom It May Concern:

I am submitting comments on the Draft Resource Management Plan (DRMP) Amendment and Draft Environmental Impact Statement (DEIS) and Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC). These comments are specific to the planning and management of the Pacific Crest National Scenic Trail (PCT).

I am writing on behalf of the Pacific Crest Trail Association (PCTA). Our 9,000-member organization is the primary private partner with the United States Forest Service, Bureau of Land Management, National Park Service, and California State Parks in the management and protection of the Pacific Crest National Scenic Trail (PCNST) from Mexico to Canada. Last year alone, programs organized under PCTA's leadership provided 115,000 hours of volunteer labor to manage the PCNST on the ground and we have participated in dozens of planning processes from the national to the local level in that time.

Seemingly, the DEIS/DEIR does not comply with BLM Manual Policy Direction 6250 for National Scenic and Historic Trails and direction to safeguard the nature and purposes of National Trails to provide for maximum compatible outdoor recreation potential, and protection, conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the areas and associated settings through which such trails may pass, as well as the primary use or uses of the trail. Additional actions are needed to ensure that significant adverse impact to the nature and purposes of the PCT do not occur.

- 1. Utilize design strategies to avoid impacts to the PCT for both recreational and scenic experiences.** It is not acceptable to infer the rationale that since the development on private land adjacent to the federal land has already occurred therefore, it is acceptable to place "a substantial number of the large-scale turbines (up to 410 feet to the top of the turbine blade), including a large number that would break the skyline of the nearby ridge tops south of SR 58" (4.18-3). Further, the fact that "their uniformity in size and shape, the fact that their large scale allows large spacing between units, and siting that follows the contours of existing topography all contribute to a degree of overall visual unity and coherence, and a reduced level of visual disorder compared to some other wind developments in the region" (4.18.3) avoids the bottom line that wind turbines create a high level of contrast in form, line, color and texture. It is inappropriate to decide that



Pacific Crest Trail Association
1331 Garden Highway • Sacramento, CA 95833
(916) 285-1846 (Phone) • (916) 285-1865 (Fax) • www.pcta.org



because it's better than other projects in the area, it's acceptable. A significant aspect of concern for this project is the siting of turbines on ridgelines as this does not meet best management practices for the avoidance of impacts to the Pacific Crest Trail. A visual analysis from the PCT-trail platform along with the removal/relocation of turbines that create a high level of contrast in form, line, color and texture should be conducted as part of the project.

2. **Reclassify the PCT to VRM Class II or Class III.** It is inconsistent with the desired condition and nature and purpose of the PCT for it to be inventoried as a IVRM Class IV. As the project is located within the foreground/middle ground distance of the PCT and the PCT is a high sensitivity level travel route, a VRM Class II or Class III would seem to be the typical compatible objectives.
3. **Assess and disclose substantial interference with the nature and purposes of the PCT.** It is imperative that the DEIS indicate whether the impacts to the trail would substantially interfere with the nature and purposes of the PCT. Equestrian and foot travel dictates a slower rate of travel and an increase in time spent viewing the proposed project from the trail. This view would be a view of a significantly degraded "natural experience" and not the "natural experience" that recreationists demand when they utilize a national scenic trail.
4. **Rewording of mitigation measure MM4.18-5.** This measure indicates that "Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the US Forest Service, BLM and Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and US Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, of additional that will benefit vistas. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail."

Relocation of the PCT needs to follow a strict process outlined in the Optimal Location Review Process found at

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5368489.pdf. This process examines and analyzes different possible trail location to find the most optimal location based on the Design Criteria outlined in Appendix C of the Pacific Crest National Scenic Trail. The PCT runs for over 2650 miles from Mexico to Canada and, as you can imagine, to improve the trail experience and to provide for enhancement, the trail would likely require a significant relocation approved by Congress.



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As always, the PCTA wishes to offer our assistance in regards to a comprehensive analysis of the visual and other impacts on the trail created by wind energy projects, in order to correct and prevent future impacts to the PCT.

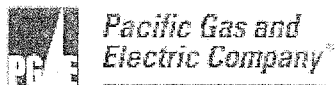
Sincerely,

A handwritten signature in dark ink, appearing to read "Anitra I. Kass", followed by a long horizontal flourish.

Anitra I. Kass
Regional Representative
Pacific Crest Trail Association



Pacific Crest Trail Association
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Sarah Gassner, Supervisor
Environmental Planning and
Permitting

1455 E. Shaw Ave., Bag 31
Fresno, CA 93710
Office: (559) 263-5073
Fax: (559) 263-5720
Email: SEGi@pge.com

September 11, 2012

Kern County Planning and Community Development Department
Public Services Building
Attn: Jacqui Kitchen, Planner III
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2370

RE: Comment to the Draft Plan Amendment & Environmental Impact Statement/Environmental Impact Report for the Alta East Wind Project by Alta Windpower Development, LLC; GPA 2, Map 168; GPA 2, Map 168-27; GPA 3, Map 179; GPA 1, Map 180; ACC 10, Map 168; ACC 4, Map 168-27; CUP No. 7, Map 168

Dear Ms. Kitchen:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to review and provide comment on the Draft Plan Amendment & Environmental Impact Statements/Environmental Impact Report (EIS/EIR) for the Alta East Wind Project. The project is described in the Draft EIS/EIR as a proposal to construct and operate a wind generation facility on 2,592 acres. In addition, the project facility would generate up to 318 MW of energy by utilizing up to 106 wind turbine generators. The project site is located 3-miles northwest of the unincorporated community of Mojave in the Mojave Desert, in eastern Kern County. Pacific Gas and Electric Company (PG&E) has the following comments to offer regarding the proposed project.

PG&E's Facilities Will Not be Affected by the Interconnection Project.

This wind project is occurring outside of the service territory of Pacific Gas and Electric Company. Therefore, PG&E has no comment to offer regarding the Draft EIS/EIR for the Alta East Wind Project.

We appreciate the opportunity to comment on the Draft Amendment and EIS/EIR for this project. PG&E remains dedicated to interconnection enterprises while maintaining efficient, cost-effective, and timely service to our customers. If you have any questions regarding this letter, please contact Jameson Saberon, Senior Land Planner, by telephoning (559) 263-5214 or emailing at J71Q@PGE.COM. .

Sincerely,

A handwritten signature in black ink, appearing to read "Sarah Gassner", with a long horizontal flourish extending to the right.

Sarah Gassner
Supervisor, Environmental Planning and Permitting

September 26, 2012

Jeffery Childers, Project Manager,
Bureau of Land Management
California Desert District Office
22835 Calle San Juan de Los Lagos,
Moreno Valley, California 92553-9046

Re: Alta East Wind Energy Project

Mr. Childers,

I am writing to comment on section MM 4.20-2 of the draft plan amendment. It states "Prior to energizing the project, the project proponent shall perform one of the following options in consultation with the Kern County Planning and Community Development Department, the Kern County Fire Department and the County Administrative Office to reduce fire impacts:

Option 1: Install an automatic fire extinguishing system that complies with international standards for fire protection systems on each wind turbine generator at the project site. Proof of system installation shall be submitted to Kern County.

Option 2: Purchase at a cost not to exceed \$350,000 an Industrial Mini Pumper for the Kern County Fire Department. If an Industrial Mini Pumper has already been purchased for the project area, the Fire Department shall consult with the County Administrative Office (CAO) to determine if there are any outstanding reimbursement requirements associated with that purchase. If the Industrial Mini Pumper has not yet been fully reimbursed by the County, then the project proponent shall pay their proportionate share of \$88,000.00 to the Planning and Community Development Department for the purpose of reimbursement of the pumper.

Option 3: If an Industrial Mini Pumper has already been purchased and reimbursed by the County, the purchase of other fire extinguishing equipment shall occur in an alternative manner that has been mutually agreed upon by the project proponent and Kern County.

I am writing to encourage the adoption of option 1. While I support the ideas contained in options 2 and 3, they should be in addition to option 1, not in lieu of it.

I am the former California State Fire Marshal and director of CAL FIRE between 2004-2009, under Governor Arnold Schwarzenegger. I am a big supporter of alternative energy sources such as wind turbines and photo voltaics. I have photo voltaics installed on the roof of my own home.

I also advocate that local, state, and federal land use decisions not add an increased burden on the dwindling fire suppression resources of California without built-in fire

protection as a mitigation. As you know, jurisdictions throughout the state are cutting back on resources due to the current economy, including fire prevention personnel, station closures, and rolling brown outs. Built in fire protection becomes even more important as these cuts are made. In the absence of built in fire protection, the magnitude of any fire will be greater.

As you might expect, as the former State Fire Marshal, my emphasis is on fire prevention. As former director of CAL FIRE, my emphasis is on firefighter safety and reducing the costs of fire suppression for the taxpayers of California.

As a former local government fire chief (Palo Alto) and a former local government fire marshal (Sunnyvale), I have supported new large developments to fund fire suppression resources such as fire stations, fire personnel, and fire equipment. But I have never supported this at the expense of built in fire protection. I have never waived fire sprinklers in buildings for fees. Such an exchange would be a losing compromise for fire and life safety merely for economic considerations. As stewards of public safety we must consider what is in the public interest for fire and life safety beyond what is in the economic interest of the developer.

When a fire starts in a remote location with high winds the probability of that fire spreading beyond the capability of the first arriving fire engine increases substantially. By the time a pumper or hand crews can respond, the fire will be growing and spreading into the wildland urban interface. Fires of this nature often grow quickly beyond the capability of firefighters within proximity. By then they will need more than a mini-pumper to fight the fire. Mutual aid becomes necessary to bring in engines, hand crews, and aviation assets from outside the area.

There is no comparable substitute for built in fire protection, especially in remote areas. Fire equipment and personnel can complement the fire prevention technology, but without the built in fire protection a mini-pumper and crew will not be able to handle the resulting fire scenario on their own. The wind turbine owner may then be subjected to civil cost recovery for the cost of the fire response as well as damages to surrounding property, business loss, and injuries. If not recovered from the owner, those costs are past on to local government, the state of California, and taxpayers.

While I was in office, I argued publicly and in the legislature that local and federal land use decisions were impacting the cost of fire protection for the state. I spent time drafting legislation with state Senator Kehoe (from San Diego area) to give the state some input into the local land use decision making process and to require local government to show that they had adequate fire suppression ability for the projects they were approving. I had similar discussions with Senator Diane Feinstein about federal government land use decisions. Several attempts at legislation have been made since I began my discussion, and continue to this day (SB1241). Local governments were also concerned about increased risks, as well as costs associated with fires on federal lands based on land use decisions, locations, and lack of adequate firefighting resources. I firmly believe that fire prevention is the key to mitigating these concerns.

While my major concern was with housing being built in the high fire severity zones within California, my concern applies to any land use project in high fire severity zones which could adversely impact fire suppression resources. A few years ago, I became involved in supporting the adoption of National Fire Protection Association (NFPA) 850, the national standard for fire protection in electrical generating sources, including wind turbines. As I looked into incidents of fire involving wind turbines, I became concerned about them as a source of wildland fires in high wind and remote locations throughout California.

I wish to request that BLM does not consider a waiver for the nacelle fire protection requirements in the EIR of the Alta East Wind Energy project in Kern County. I would like the opportunity to present my issues and concerns in any public meeting that may be held on modifications relating to fire protection contained the EIR/EIS. I would also appreciate the opportunity to inform any local and state emergency response fire agencies which could be impacted by such a decision, and which would likely be called for mutual aid (including state resources from CAL FIRE). In addition, I would like the time to insure that other stakeholders have an opportunity to understand and respond to any modifications relating to fire protection contained in the EIR/EIS.

Thanks for your time and consideration in this matter. If you have any questions, please do not hesitate to contact me at [916-799-9710](tel:916-799-9710) or by e-mail at calfire@gmail.com

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Grijalva'.

Ruben Grijalva
Former CA State Fire Marshal
Former Director of CAL FIRE

Wind Industry Fire Incidents US & Abroad As of August 2012

With the height of a wind turbine nearing 300 feet when a fire occurs the best option is to wait patiently for the fire to burn out. This option can be very expensive and dangerous for employee safety, equipment replacement and debris management. Fire is the second most common accident found and documented by Caithness Windfarms Information Forum.

From the data gathered from Caithness Windfarm Information Forum, since 1993 to present there have been 128 fire incidents reported. A majority of fire incidents are not reported to the authorities and/or reported by news organizations. In addition, the number of those fires that were not included in the Caithness report there are three incidents one in which there was a fatality by a man who fell from a turbine that was on fire.

There are currently no regulations for reporting fire incidents whether large or small, making it far more difficult to offer accurate fire data. Most wind farm owners have experienced some fire loss and with the ever increasing demand for renewable energy availability it is difficult to have a wind turbine down for months while awaiting component replacement.

- Many of the largest wind turbine manufacturers have found it important to offer fire suppression as an option to their customers and are working with fire suppression organizations globally to make these offerings available.

Health & safety regulation and protection for renewable energy are far behind many of the other utility scale power generation plants. With wind and other renewable energy the high expectation for availability and efficiency are expected. While equipment such as gear boxes, transformers and blades are very important pieces to maintain for availability and effectiveness, health and safety of workers as well as equipment need to take center stage. With an expectation of a 20 year life expectancy for a wind turbine and an installed capacity of roughly 31,000MW in the US alone it is important that health & safety catch up.

The National Fire Protection Association (NFPA) has added wind turbine and out building fire protection standards to the NFPA 850 Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations. These recommendations have been accepted as of January 2010.

The Occupational Safety & Health Administration (OSHA) is developing a working relationship with the American Wind Energy Association (AWEA) to develop best practices for health & safety in the growing renewable wind energy sector. Because of the added attention to the industry it is important that health & safety play a more significant role.


Insurance providers, while they do like the idea of fire protection for their own assets, are finding it difficult to provide premium reductions. Insurers are in situations where they are splitting the coverage of a wind farm with another insurer and only able to cover 50%. This would make it difficult for one insurer to make a determination for only half of the farm coverage. For those large wind farm owners they may have a deductible that covers them during down time but if they have a loss of only one cabinet and replacement and down time stays below the known deductible of \$250,000 the cost of our fire suppression system would be less than 1%. In addition, there are many wind farm owners that find themselves depending on the warranty to cover such incidents and/or are self-insured leaving them open for significant loss and replacement costs. "It is not a matter if (there is a fire) it is a matter of when," says a Technical Service Manager for Starr Technical Risk Agency.

Specific Fire Incidents Data and Results:

- 89 components in a wind turbine have been damaged by fire since 2002 as reported by one technical repair organization called AREPA. These wind turbine components include control panels, transformers and other micro-environments that can be easily protected. These are a selection of the many unreported incidents affecting the wind industry.
- \$750,000–\$ 6 million is the range of property damage on those incidents reported.
- 13 injuries and 1 death are the result of fire in the wind turbine.
- 900 acres and 240 firefighters were required to put out a blaze started by a wind turbine.
- 220 acres burned due to wind turbine fire.
- 367 acres burned due to wind turbine fire.
- **139** fire incidents have been reported as of February 2012 in the United States and abroad according to Caithness WindFarms Information Forum and other News Reports.

- Since August 2011 there have been 11 news reported fires, see attached.



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McBain Wind Turbine Catches Fire

Posted On: 8/3/2011

Construction crews will have to assess the damage to a wind turbine that caught fire in **Missaukee County**.

Crews cut the power to the turbine near **McBain** Tuesday, which seemed to put out the flames before firefighters arrived.

This was the first fire emergency with those turbines and the fire chief says if the fire was serious there is really little they can do to fight it and save the turbine.

Crews still aren't sure what caused the fire.



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KTXS.com

Wind Turbine Erupts Into Flames Southwest Of Abilene

By Wayne McCormick, KTXS News

POSTED: 4:26 pm CDT August 25, 2011

UPDATED: 5:03 pm CDT August 25, 2011



ABILENE, Texas -- Firefighters from at least three volunteer departments are on the scene of a burning wind turbine southwest of Abilene.

ECCA Fire Chief Gary Young said the fire started in the wind turbine tower and then spread to grass around the tower.

Young said firefighters are working in rough terrain trying to keep the fire from spreading to other towers in the area.

The turbine is owned by NextEra Energy and is located in the Callahan Divide wind project off of FM Road 89 about 5 miles west of Highway 277.

Crews from ECCA, Buffalo Gap and Nolan are on the scene.

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KTXS.com

Wind Turbine Catches Fire Near Rep. Susan King's Home

By Michelle Chan, KTXS News

A fire started near the weekend home of Texas Representative Susan King. Representative King called authorities just after 10 p.m. on Sunday after she spotted a wind turbine on fire.

The Buffalo Gap, View and Eccla Volunteer Fire Departments responded with eight engines and dozens of firefighters. The fire spread to surrounding grass and burned around two acres before crews were able to put it out.

It is unclear what caused the wind turbine to catch fire, but this is the second time a wind turbine has caught on fire in the same area in the last five weeks.

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WHEN OFFSHORE WIND EXPERIENCE COUNTS...

Vestas turbine catches fire in high winds

James Quilter, Windpower Monthly, 09 December 2011, 9:02am

UK: A wind farm in Ayrshire, Scotland has been disconnected from the grid after one of the project's Vestas 2MW turbines caught fire during high winds.





The 30MW Ardrossan project in Ayrshire is owned by Infinis Energy and uses Vestas 2MW turbines. The incident occurred as the northern half of the UK faced winds of up to 165mph.

In a statement, Infinis confirmed the nacelle had caught fire but was unable to give further details on the cause. It said no one was present when the incident happened, as staff are always evacuated from the site in 55mph+ winds as a precautionary measure.

No gearboxes to replace


- > No oil to change or leaks to contain
- > No batteries to replace
- > Fewer trips up-tower
- > Fewer spare parts
- > and minimal crane mobilization

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element 14 

Infinis said ScottishPower, which operates the local network, had disconnected the wind farm.

The incident comes only a year after Infinis acquired the project from Scottish and Southern Energy. The project was commissioned in 2004 and received a 6MW extension in 2009.

The image of the burning wind turbine, which was sent into the BBC by a member of the public, has been reproduced in the UK press to illustrate the weather conditions.

Officials investigating turbine fire

Posted: Friday, January 20, 2012 12:00 am

WETHERSFIELD — Officials are investigating what caused a fire Monday at a Noble Environmental Power wind turbine.

“On Jan. 16 a transformer failed at the base of a wind turbine,” said Asset Management Director Brad Hastings. “There were no injuries. The transformer was replaced and the turbine resumed operation later that day.”

Noble Environmental Power operates two wind farms in Wyoming County. The Noble Wethersfield project includes 84 turbines, while Noble Bliss includes 67 turbines.

Wind turbine catches on fire

By WCAX News - [bio](#) | [email](#)

Altona, New York - January 29, 2012

Authorities are investigating what caused a wind turbine to catch fire in Northern New York.

It happened Saturday night in Altona. Officials say people driving by the windfarm noticed the fire in one of the 400 foot turbines. Noble Environmental, the owner of the windfarm, says no one was injured. The cause of the fire is not known.

Two years ago a turbine at the same park came crashing down when the blades spun out-of-control in high winds. An investigation in that case uncovered a wiring problem that prevented the turbine from safely shutting down.

Wind speed at the time of Saturday night's fire was reportedly around 25 miles per hour.

Blue Knob Firefighters respond to Wind mill fire

By **BRUCE WALTERS** Correspondent

1st Responder Network

Story Number 020612107

Disclaimer: This article is a direct street report from our correspondent and has not been

At 07:01 Blair County 911 alerted the Blue Knob VFD for a Wind Mill fire at the Allegheny Wind Farm in Juniata Township. Engine/Tanker 86-21, Tanker 86-22, Brush 86-71, Squad 86-41, and Special Unit 86-42 all responded on the call under the direction of Assistant Chief 86-04 (Walters). The burning unit could be seen by responders as they left the fire station. Crews had to gain access via a dirt lane which was over 4 miles off of Route 164.

Units arrived on the scene to find a 300ft wind mill well involved. A perimeter was set and crews staged while the fire was left to burn itself out. Special Unit 86-42 was later deployed to recon the area for burning debris.

Mutual aid was requested from Cambria County Station 83 (Portage) and Station 72 (Lilly) as well as Blair County Station 20 (Duncansville)

Crews remained on the scene for over 6 hours with the area secured.

The cause of the fire is not yet known.



“(In the first seven months of 2011, eight wind turbines were burned down due to various reasons.)”

WINDPOWER MONTHLY


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CFD SOFTWARE FOR WIND RESOURCE ASSESSMENT

CSR turbine fire kills two workers in Inner Mongolia

Wu Qi, Windpower Monthly Magazine, 22 February 2012, 9:06am

CHINA: Huaneng Renewables has revealed one of its wind turbines caught fire in a wind farm in Inner Mongolia, killing two engineers.

 The accident happened at a Huaneng wind farm in Inner Mongolia

The accident happened at a Huaneng wind farm in Inner Mongolia

The accident took place in the Second Zhurihe Wind Farm, Tongliao city, north China's Inner Mongolia. Huaneng has not officially released information on the accident. Huaneng Tongliao Wind Power Company, which runs the Second Zhurihe Wind Farm, said the incident is under investigation.

At about 16:00 of 7 February, the wind farm, undergoing an overhaul when one of the turbines caught fire. Two maintenance personnel were in the nacelle eliminating frequency converter faults.

The wind turbine is made by China South Locomotive and Rolling Stock (CSR) and the frequency converter was made by AMSC. CSR said the cause of the accident was unclear and that it was investigating the accident with Huaneng and the local safe production regulators.

The first stage of the Second Zhurihe Wind Farm has 300MW installed capacity. To date, all the other 100-odd turbines have been operating normally, according to sources in the wind farm.

Since the fire fighting apparatus could not reach the hub height of 80-metres, the fire fighters failed to control the fire. It burnt for about 12 hours and extinguished by itself at about 3:00a.m in the second morning. The wind turbine nacelle was burnt away, and the three blades were damaged to varying degrees.

The fire fighters found a body at the second platform of the wind tower, who had died as a result of head injuries. The other engineer has not been found.

CSR says that when the accident took place, the wind turbine was shut down for overhaul, and this means the accident was not caused by turbine quality problems. "We will not say the turbine is flawless, but there must be other reasons," said CSR.

In recent years, China has seen many cases of wind turbines catching fire, as more and more wind farms go into operation.

Yang Kun, the chief engineer of State Electricity Regulatory Commission, recently said that since 2010, there has been a rise in the number of accidents with Chinese wind turbines. In the first seven months of 2011, eight wind turbines were burned down due to various reasons.

Chinese wind farms largely keep only a number of portable fire extinguishers in the turbine engine room and the bottom of the wind tower. The ground-based fire fighting apparatuses are helpless to fire burning in the engine room, because they cannot reach the height.

Industry officials say that China remains backward in the standard with fire fighting system in wind farms, and wind farm developers have not paid enough attention to the problem.

Huaneng Tongliao Wind Power Company has installed over 1GW in Tongliao. It plans to expand this to 2.13GW by 2015.

More Trouble For Vestas? New Wind Turbine Model Catches Fire In Germany

Laura DiMugno, Tuesday 03 April 2012 - 08:45:07



Two recent incidents could hurt Danish wind turbine manufacturer Vestas' reputation, which has suffered from credibility problems over the past year due to massive layoffs, earnings revisions and a major corporate restructuring.

The first incident involves a Vestas wind turbine that caught fire at the Gross Eilstorf wind farm in Lower Saxony, Germany, on March 30. According to the company, the V112-3.0 MW turbine - a new Vestas turbine model - had been working properly before the fire broke out.

Vestas said that safe access to the wind turbine was still possible and that the fire was burning under "controlled conditions."

In addition to disconnecting the affected turbine from the power grid, Vestas shut down three other V112 wind turbines located nearby. The wind farm's remaining 13 V112 turbines are running as usual, the company said.

As a precaution, Vestas also reviewed its entire fleet of V112 wind turbines and concluded that the rest of the units were operating as intended.

The V112 wind turbine - a 3 MW machine - is Vestas' largest onshore wind turbine, and it is unclear whether its larger capacity contributed at all to the incident. The company said it was launching a full investigation into the cause of the fire and that a third party has been engaged in the analysis.

A spokesperson for Vestas told **NAW** that the company is aiming to release the findings of the investigation by next week.

No injuries were reported in relation to the fire. However, a separate incident has resulted in the injury of a worker at the Macarthur Wind Farm, a massive 420 MW wind project jointly developed by AGL Energy and Meridian Energy.

Although Vestas did not state the source of the injury, the company said that Leighton Contractors, which manages the wind farm site, is investigating the matter. However, the company did rule out some causes.

"Vestas can confirm that the injured worker was not crushed by a wind turbine or a wind turbine blade," the company said in a statement.

Despite its recent troubles, Vestas remained the No. 1 wind turbine manufacturer in the world in 2011, capturing 12.9% global market share, according to a recent study by MAKE Consulting.

Nonetheless, more bad news may be pending. Vestas warned in January that if the production tax credit for wind energy is not extended beyond this year, the company will lay off an additional 1,600 employees in the U.S.

Photo courtesy of Vestas Wind Systems A/S

Wind



A Vestas V112-3MW turbine.

Loose connection sparked V112 turbine blaze, says Vestas

Danish wind turbine manufacturer Vestas says it has identified the root cause of a fire in one of its V112-3.0 MW machines in Germany at the end of March.

RELATED STORIES - Published: Wednesday, April 25 2012 [Ben Backwell, London](#)

After an investigation, the company found that the fire started in the turbine's Harmonic Filter Cabinet as a result of a loose connection in the electrical system that created an arc flash.

"The solution to this problem has been confirmed by specialists. It involves using a different type of washer on the electrical connections in the Harmonic Filter Cabinet," Vestas says, adding that the solution is in the process of being implemented in the affected turbines and customers are being informed.

Vestas is still awaiting reports from two external experts who worked side-by-side with its own investigators. These are expected within "a few weeks".

"Vestas is confident that this final conclusion will be confirmed," it says in a statement.

At the site of the blaze – the 51MW Gross Eilstorf project in Lower Saxony – the burned nacelle has been replaced and is scheduled to be commissioned next week.

A small number of other machines were **halted** while the inquiry was held. Most of the paused V112 turbines have been restarted or are in the process of being restarted.

"As we return the paused turbines to normal operations, we have used the opportunity to reschedule and move forward on already-planned upgrades," says Vestas, adding that these are not related to the root cause of the incident.

"We are taking the opportunity to do as much work as we can on the turbines to minimize any future inconvenience to our customers," Vestas says. It still expects all of the paused turbines to be returned to normal operation by the end of the month.

Another Wind Turbine Blaze: Fire Breaks Out At Iowa Wind Farm

Laura DiMugno, Thursday 24 May 2012 - 12:42:30



Less than two months after a Vestas V112-3.0 MW wind turbine went up in flames in Germany, another wind turbine has caught fire - this time, in the U.S.

On May 22, emergency personnel responded to a fire at Iberdrola Renewables' Barton 2 Wind Power Project in Worth County, Iowa, company spokesperson Jan Johnson tells **NAW**.

Iberdrola worked with the emergency crew to extinguish the fire. Johnson says, adding that no one was in the turbine at the time of the incident and that there were no injuries.

The fire occurred in the nacelle of a Gamesa G87-2.0 MW machine, which had been in operation for almost three years since the wind farm was placed in service in June 2009.

The 80 MW Barton 2 wind farm - a segment of the larger 160 MW Barton Wind Power Project - comprises 60 Gamesa G87 turbines.

Gamesa spokesperson David Rosenberg says the company has not been involved with the Barton project since May 2011, when its operations and maintenance contract expired. He would not comment on if the company is taking any quality-control measures to ensure proper performance of other G87 machines but says the turbines are "remarkably reliable."

The cause of the fire is still unknown, but Iberdrola has launched a full investigation into the matter.

Fire in Vestas turbine

[Michael McGovern](#), Windpower Monthly, 08 June 2012, 3:37pm

SPAIN: A second Vestas turbine in as many months has caught on fire, it has emerged.

Only shortly after tackling a nacelle fire on one of its V112-3.0MW turbines in Germany in April, the Danish manufacturer has had to contend with another fire, this time on one of its V90-2MW machine in Spain.

The fire in May was due to "an electric arc flash" which took place during the performance of a service operation, a company spokeswoman told *Windpower Monthly*. "Vestas is currently carrying out investigations to find the root cause of the electric arc flash," she added. Once finalised, she said Vestas would inform its customers and take any necessary actions.

An employee, performing a service operation in the control cabinet at the nacelle, suffered burns to hands and face and was rushed to hospital in the incident. He is now back home and his recovery is progressing "satisfactorily", said the spokeswoman.

The machine was operating in the five-year-old Casa del Aire wind plant in the district of El Bonillo in the south-central province of Albacete, a hot spot for brush and forest fires. The fire brigade extinguished the flames, which also spread to the surrounding vegetation.

The plant developer, Renovalia, declined to comment, saying the full onus for comment fell on Vestas, not only as turbine supplier but also as operations and maintenance provider.

"Taking into account the information available today, the incident in Casa del Aire is an isolated case and has no connection to the V112 fire in Germany or to any other incident in a Vestas turbine," said the Vestas spokeswoman.

In the German case, the company concluded that the fire started in the harmonic filter cabinet as a result of a loose connection, which will be remedied by using a different type of washer on the electrical connections.

CAL FIRE: WIND TURBINE GENERATOR CAUSED WILDLAND FIRE THAT CHARRED 367 ACRES



Charred earth around turbine generator that caused wildland fire

By Miriam Raftery

July 31, 2012 (San Diego's East County) – With County Supervisors poised to consider approval of Tule Wind and a wind ordinance that could open much of fire-prone East County to wind energy development, a wildland fire that started at a wind turbine facility in Riverside County last month provides fuel for opponents concerned about fire risks posed by industrial-scale wind projects.

"The fire started with the windmill itself," Captain Greg Ewing with Cal Fire/Riverside Fire Department informed ECM today.

Despite extensive area cleared around the base of each turbine, Ewing said, the blaze still spread into a wildland fire that swiftly engulfed 367 acres. If not for prompt reporting by a witness, it could have been far worse.

According to [Cal Fire's report](#) on the incident, The View Fire occurred in the Whitewater area east of Cabazon in Riverside County on June 17, 2012 at a wind facility near Cottonwood Road and Desert View. A caller who dialed 911 initially reported seeing flames and "one confirmed windmill on fire" at 9:15 p.m.

By 9:33 p.m., CHP stated it had received multiple reports that there were “several windmills on fire” along with a ridgeline near I-10 and Haughen-Lehmann Way. Callers also reporting “popping loud noises” as the turbines burned. Both ground crews and aircraft battled the blaze.

Residents in the box canyon were evacuated, including 90-year-old Barbara York, who had time to grab only an overnight bag. York was “frantic,” the [Desert Sun](#) reported at the time.

At 12:34 a.m. on June 18, Cal Fire’s report on the fire indicates that a request had been made for Edison, since power lines had caught fire in the middle of the wind turbines. More than 100 firefighters fought the fire through the night.

The blaze was ultimately stopped at 367 acres, including 100 acres of public lands on Bureau of Land Management property. The final report blames “equipment”, specifically a “generator” and “arcing” for the fire.

Asked directly whether the generator that caused the fire was an actual wind turbine, Captain Ewing confirmed, “Yes ma’am.” He also confirmed that ground had been cleared around the base of each turbine, the blaze swiftly spread to become a wildland fire despite those precautions. Captain Ewing did not know the precise cause of the turbine malfunction. “Several companies lease the land,” he noted. “Other companies own the windmills and others service them.”

Asked whether Cal Fire intends to seek compensation for the firefighting costs, Ewing replied, “I can’t comment on that.” He did not have the total cost of the firefighting efforts to quell the wildfire.

Wind developers have claimed that clearance around turbines, coupled with improved technology, make prospects of fires slim. Earlier this year, a representative from Iberdrola (developer of Tule Wind) assured ECM that the odds of a modern wind turbine causing a fire that escapes to become a wildland fire were infinitesimal.

It only takes one wildfire to scorch hundreds of thousands of acres, putting homes and lives at risk, as San Diegans well know. Is that a risk worth taking, for the promise or renewable energy from wind?

When comparing the viability of wind to other options such as rooftop or parking lot solar, should the potential costs of firefighting--as well as potential liabilities for damages to property and lost lives--be factored into determining projects' long-term costs and benefits?

The BLM has already approved construction of 65 wind turbines in Phase 1 of Tule Wind on BLM land in McCain Valley. On August 8, the County Supervisors will consider whether to follow planners advice to turn down an application form Iberdrola for five more turbines on County land.

The bigger issue for Supervisors will be whether or not to approve an upcoming sweeping wind ordinance that could open wide the doors for large-scale wind turbine developments, each with dozens or even hundreds of towering wind turbines in fire-prone areas of East County.

In rural East County, where 100-mile per hour gusts quickly transformed the Harris Fire into a raging inferno during the 2007 firestorms--a nightmarish repeat of the 2003 Cedar Fire. Dubbed the Santa Anas (or "devil winds")

by the Spanish, the winds are common in East County during the hottest, driest season. Thus it is prudent for County officials to give serious thought to potentially serious consequences should a turbine malfunction in a remote location.

Homeowners near the View Fire were fortunate that a witness spotted the fire and reported it promptly, before homes or lives were lost. What happens if a turbine fire occurs in a remote East County location in the middle of the night? Will flames engulf homes, or in the case of Tule Wind, campsites in the path of the fire? Could the County be held liable if wind turbines that it approves cause a devastating wildfire?

These are troubling questions that deserve satisfactory answers.



<http://eastcountymagazine.org/node/10581>

Item #281

STORM LAKE, Iowa (AP) -- A fire trapped two workers at the top of a 213-foot wind turbine until firefighters could reach them.

The electrical workers were working on a control panel inside the turbine's support tube last week when the fire broke out. They were treated at a local hospital and released.

Firefighters received a call about 7:35 p.m. on Nov. 30 that there was a fire in the MidAmerican Energy wind turbine, just south of Schaller.

Firefighter Armon Haselhoff said the doors to the turbine were shut to keep oxygen from feeding the fire, since the support tube could have acted like a chimney.

The workers were able to get fresh air through a hatch at the top of the tube, Haselhoff said.

Firefighters extinguished the blaze, which appeared to have started from a short circuit during testing.

Once the fire was under control, firefighters climbed to the top of tube to help the workers down, Haselhoff said.

Firefighter Jason Currie and another firefighter ran out of air in their packs before they reached the top, but kept going anyway.

``It got worse every level we went up," Currie said.

Firefighter Jeff Sandoff said he and Currie had zero visibility climbing inside the tube.

``Once we climbed the tower, it was just your hands reaching in front of you," Sandhoff said.

He said firefighters had radio contact with the trapped workers.

Mark Reinders, MidAmerican spokesman, said the turbine was still under construction. The employees were from M.A. Mortenson, a General Electric subcontractor.

The fire will not delay the project, which is scheduled to be completed by the end of this year, Reinders said.

[http://cms.firehouse.com/web/online/News/Fire-Traps-Workers-at-Top-of-213-Foot-Iowa-Wind-Turbine-/46\\$37238](http://cms.firehouse.com/web/online/News/Fire-Traps-Workers-at-Top-of-213-Foot-Iowa-Wind-Turbine-/46$37238)

Item # 336

December 24, 2005

Credits: *Sunderland Today*

Description:

A HUGE wind turbine went up in smoke in a massive blaze seen for miles across Wearside.

The 200ft structure at the Nissan factory, part of a £2.3million wind farm built in August, burst into flames just after 12.30pm yesterday.

The fire was so fierce all three 75-ft long fibreglass blades eventually dropped off and thick black smoke could be seen for miles around.

Almost 200 people dialled 999 to alert emergency crews as flames engulfed the turbine.

Police closed both the A1231 and the A19 for an hour-and-a-quarter amid worries that parts of the metal tower could fall on to the busy roads.

The six turbines were bought second-hand at a cost of £1.1million, having been previously used on a wind farm in Germany.

Graham Bagley, from Nissan, told the Echo in August it did not make financial sense to buy new ones and claimed the turbines were in "excellent condition".

A spokesman for Nissan denied the turbines are unsafe.

"It is the same design that has been used in wind farms all over the world and as far as we're aware nothing like this has happened before," he said.

"If there had been any concerns about the turbines we would never have purchased them. "We're taking this very seriously and until we know what has caused this all six turbines will be shut down."

He said engineers from Vestas, the company who manufactured the devices, had been working on the affected turbine since an oil leak was detected on Thursday.

"It was the third turbine and is the nearest one to our test track," the spokesman said.

"Engineers were repairing it yesterday morning and they had restarted it when the fire started. As far as we are aware it was oil that caught fire and the blades then burnt through. They are made of fibreglass and they burnt right down to the metal shaft before falling off. Nobody was hurt. We have now shut down all the other turbines and engineers are carrying out checks on all of them. We apologise for any inconvenience that may have been caused by this."

Both the main roads were reopened at 2pm. A spokeswoman from Tyne and Wear Fire Service said: "We had seven fire engines in attendance and because of the risk of the structure falling onto the A19 police closed the road and the A1231.

"The majority of the structure eventually fell away from the road."



Item # 353

Around \$2m damage has been caused in what is believed to be the first wind turbine fire in Australia at the Lake Bonney windfarm. This article appeared in the Adelaide Sundaail 12 February 2006.

SUNDAY MAIL www.sundaymail.com.au February 12, 2006 7

EXCLUSIVE: What happened at an SA wind farm when we needed its power during the heatwave ...

Scorched out

David Nankervis

A \$3 MILLION wind farm turbine caught fire while dozens shut down at the time South Australia most needed them - when a heatwave left 63,000 South Australian homes without power last month.

Adding to the drama, firefighters could not extinguish the blaze because the tower was too high at 67m.

Lack of wind and automatic shutdowns triggered by hot temperatures were to blame for the state's 180 turbines producing just 10 per cent of their maximum power capacity during the January heat wave, according to experts.

The experience proved SA could not rely on wind power to provide electricity when demand was greatest, the Electricity Supply Industry Planning Council (ESIPC) said.

"You never know if the wind will be blowing when you need it to or if wind turbines will shut down," ESIPC spokesman Brad Cowain said.

Operators of the Lake Bonney wind farm, where the turbine fire occurred on Sunday, January 22, said all of its 46 turbines had automatically shut down during the heat wave when temperatures exceeded 40C.

"We want the turbines to operate during peak demand to capture revenue but power output is limited by the automatic shut down to protect electrical instruments," wind farm operator Miles George of Babcock and Brown Wind Partners said.

He said the turbine fire - the first in Australia - had been caused by an electrical fault while maintenance crews were working on it after it had shut down.

Around 3pm, 40 CFS firefighters and six trucks rushed to the wind farm to extinguish the blaze but fire hose water couldn't reach the steel generator at the top of the tower.

Instead, the firefighters watched as fire destroyed the \$3 million turbine - which weighs 75 tonnes - and extinguished spot fires ignited by ashes from the turbine blaze.

According to ESIPC, many of the European manufactured turbines used in SA



UP IN SMOKE:
The burnt-out motor of the Lake Bonney turbine

INSET:
Its height meant firefighters could not reach it to extinguish the blaze

shut down during extreme temperatures to avoid generator meltdown.

"Most turbines are manufactured in Europe where they don't have to worry about operating at high temperatures," Mr Cowain said.

"We are investigating which individual turbines were not operating because of a shut down or lack of wind."

Between Thursday, January 19 and Sunday, January

22, maximum temperatures exceeded 40C throughout most of the state, creating record demands for electricity while wind farm output averaged only 10 per cent.

But during Saturday's peak power demand wind farm output plummeted to just 2 per cent of capacity, producing enough power for only 3500 homes, according to ESIPC. This compared with

the maximum capacity of 318MW to power 175,000 homes. SA leads the nation in wind farm energy with five established sites - Starfish Hill, Canunda, Wattle Point, Cathedral Rocks and Lake Bonney.

There are numerous other approved wind farm developments including an AGL plan for 43 turbines at Hallet in the state's Mid North.

But AGL also plans to more

than double the capacity of its nearby gas-fired plant, from 180MW to 430MW, at a cost of more than \$100million to ensure peak demand during hot weather can be met.

The state's independent energy regulator Pat Walsh declined to comment about the wind farm performance during the heat wave or its implications on the state's overall energy supply.

Item #362

Flames lap Oak Creek pass

The fire was caused by burning debris from a wind turbine that caught fire due to a malfunction.

June 3, 2006 in Tehachapi News

Flames that marched across the hills of Oak Creek Pass on May 26 brought firefighters from several jurisdictions to battle the area's first large-scale fire of the season.

The fire began about 2:10 p.m. west of Tehachapi-Willow Springs Road approximately one mile south of Oak Creek Road and burned approximately 900 acres of desert brush and grass. The fire was 40 percent contained by 10 p.m.

According to Kern County Fire Department inspector Tony Diffenbaugh, 241 firefighters battled the fire.

"Crews were assisted by airtankers, helicopters and bulldozers, however, the air operation was halted after about two hours due to high wind conditions," he said. Diffenbaugh also said that rugged terrain along with the high wind conditions hampered containment efforts.

He said firefighters constructed a fire break approximately seven miles long and used Tehachapi-Willow Springs Road to stop the spread of the fire.

"Several spot fires on the east side of Tehachapi-Willow Springs Road that were started by wind blown embers were quickly extinguished by firefighters," Diffenbaugh said.

He said that several structures in the area, including homes and wind energy producing equipment, were threatened by the fire.

Cooler temperatures and higher humidity overnight aided firefighters in their efforts to secure the perimeter of the fire.

Diffenbaugh said that by 7 a.m. on May 27, the fire was 80 percent contained. He said firefighters stayed on and remained on the fire until May 28 until the fire is completely controlled.

"The reduction in the final acreage of 787 is due to more accurate mapping performed

by the KCFD Geographical Information Systems (GIS) Unit," Diffenbaugh said. "Using GPS equipment, GIS personnel mapped the entire perimeter of the fire."

He said that by using a specialized computer program, the information was converted into a highly accurate map of the fire.

The fire was caused by burning debris from a wind turbine that caught fire due to a malfunction.

The firefighting operation was conducted under the command of KCFD Battalion Chief Hiedi Dinkler. California Department of Forestry, United States Forest Service, CCI fire crew and Los Angeles County Fire Department assisted with the fire.

Contributing writer Nick Smirnoff contributed to this article.

Web link: <http://www.tehachapinews.com/home/viewarticle.php?...>

Item #376

Taiwan Power Co seeks investigation of wind-turbine fire

dpa German Press Agency

Published: Tuesday October 17, 2006

Taipei- The Taiwan Power Co (Taipower) has asked Spain's Gamesa to investigate the cause of a fire that destroyed a Gamesa-built wind turbine in what is believed to be the world's first wind-turbine blaze, a Taipower official said Tuesday. "We have asked Gamesa to send technicians to Taiwan to investigate the cause of the fire," Chen Wu-hsiung, director of Taipower's Wind Power Department, told reporters after Monday's blaze. "Preliminary investigation points to the generator's overheating as the cause of the fire."

Firefighters needed one hour to put out the fire because the generator was 67 metres above the ground. Including its blades, the wind turbine stands 107 metres tall.

Taipower has bought six wind turbines from Gamesa, one of the world's leading wind-turbine manufacturers. The six turbines were installed in Hsinchu County on Taiwan's west coast at the end of September and have been undergoing trial run before they go into commercial operation, scheduled for next month.

Tseng Kuo-hua, a professor at Tamkang University, said the fire raised concerns about the safety of wind turbines because it's difficult to extinguish a fire about 30 storeys high.

"I am shocked and very disappointed because wind power is a mature technology and this should not have happened," Tseng told the Broadcasting Corp of China.

He said Taiwan must ensure the safety of wind power because the island plans to install 1,100 wind turbines by 2010.

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http://rawstory.com/news/2006/Taiwan_Power_Co_seeks_investigation_10172006.html

Item #438

Whitewater Canyon blaze blamed on windmill

Firefighters have fully contained a 68-acre wildfire in the Whitewater Canyon area about 1.5 miles north of Interstate 10, according to CAL FIRE.

Fire officials expect to have the blaze under control by 8 a.m. Saturday.

Whitewater Canyon Road has reopened to traffic.

The Alta Mesa fire, reported at 6:19 a.m., is not threatening homes, spokeswoman Jodi Miller said.

"It's in a pretty remote area," Miller said.

It was caused by an undetermined problem with a wind turbine, according to CAL FIRE.

The wildfire is isolated to the steep slopes and ridges west of Whitewater Canyon Road.

"It's light grass; it's sporadic and patchy," Capt. Fernando Herrera said. "That's a good advantage, that there's not a lot of heavy vegetation."

Hand crews cut fire lines that had contained most of the fire.

One inmate firefighter was taken to a local hospital for heat related injuries.

While homes seem safe, gusty winds have firefighters, and area residents, cautious.

"We're dealing with 50 mph gusts on top of the hills, where the fire started," Herrera said.

"We went up the road and talked to the firefighters and they said we're in no danger at this time," said Anita Sampson, a Cecil Road resident in Whitewater less than a mile south of the fire.

Fellow local resident Angie Brashears said residents would remain wary of the fire all day.

"We have a neighborhood watch program where we all kind of look out for each other and keep each other informed," she said.

Though portions of the fire were close to a line of wind turbines at the top of a hill, none of the turbines were damaged, Herrera said.

Fifteen engines, four hand crews and four aircraft are battling the blaze. By Keith Matheny and Michelle Mitchell [The Desert Sun](#)

Item #442

Wind turbine burns near Garner (update)

A wind turbine south of Garner burned Wednesday morning causing two of the blades to fall off. ...He said the fire burned for half an hour to 45-minutes before the blades fell off. "When the blades fell, there was all kinds of debris flying all over the place," he said.

October 3, 2007 by Bob Link in Globe Gazette

GARNER — Fire caused major damage to a wind turbine Wednesday morning at the Hancock County Wind Farm southwest of Garner.

The large compartment holding the gear box and electric components more than than 200 feet above the ground burned and two of the three 77-foot blades broke off, falling to the ground.

No one was injured and damage was limited to the turbine, according to a spokesman for Florida Power and Light Energy, of Juno Beach, Fla., owners of the wind farm.

The fire was reported shortly after 8 a.m., according to Hancock County Sheriff Scott Dodd.

The turbine's third blade remained connected and was hanging straight down.

The sheriff's office and Garner Fire Department were at the scene.

The fire started near the rear of the equipment housing compartment and worked its way toward the blades, according to Garner Fire Chief Terry Jass.

"We pretty much were on standby and when things fell to the ground we put them out," he said. "The blades were burning when they fell."

Ken Engstler of Engstler Construction of Garner was working on a farm near the turbine when one of his crew members saw smoke coming from the turbine.

"Smoke was rolling out of it," said Engstler. "So we got in the truck and started heading up that way."

He said the fire burned for half an hour to 45-minutes before the blades fell off.

"When the blades fell, there was all kinds of debris flying all over the place," he said.

Steve Stengel, a spokesman for Florida Power and Light, said the cause of the fire is not known.

"The damage was isolated to one turbine and the balance of the wind farm remained operational," he said.

"The turbines are all connected on different circuits," he said. "So it is possible that four or five other turbines were taken out of service because of the fire."

Stengel said no Florida Power and Light customers would have had service interrupted by the fire.

Stengel said there are 148 turbines in the 80-square-mile Hancock County Wind Farm. The wind farm went into operation in 2002.

Web link: <http://www.globegazette.com/articles/2007/10/03/la...>

Description:

A turbine on a FPL wind generator caught fire near Garner.



Item #473

Mt. Storm turbine catches fire

According to NedPower Mount Storm spokesperson Tim O'Leary, a wind turbine in Mount Storm caught fire at approximately 5:15 p.m. on Tuesday afternoon. According to O'Leary, the fire occurred during routine maintenance and started in the nacelle of the wind turbine. ...NedPower is currently working on Phase 1 of the Wind Turbine Project - which consist of 82 turbines. Phase 2 will consist of 50 turbines, for a total of 132 turbines.

January 16, 2008 in Mineral Daily News-Tribune

According to NedPower Mount Storm spokesperson Tim O'Leary, a wind turbine in Mount Storm caught fire at approximately 5:15 p.m. on Tuesday afternoon.

According to O'Leary, the fire occurred during routine maintenance and started in the nacelle of the wind turbine.

The nacelle refers to the structure which houses all of the generating components, gearbox, drive train, etc.

After an assessment, it was determined that both the nacelle and one of the turbine blades sustained damage.

No injuries were reported.

"As far as my knowledge is concerned, no other fires have occurred," said O'Leary.

NedPower project staff and the Mount Storm Volunteer Fire Department responded to the scene.

The cause of the fire is yet to be determined as an investigation continues.

"NedPower appreciates the support of the Mount Storm Volunteer Fire Department," said O'Leary.

NedPower is currently working on Phase 1 of the Wind Turbine Project - which consist of 82 turbines. Phase 2 will consist of 50 turbines, for a total of 132 turbines.

The project is slated for completion by 2009.

Item #487



Fire ruins turbine at wind farm; Birds Landing blaze gutted 1 of 90

A wind turbine caught fire in Birds Landing early Monday, but investigators have yet to identify what caused the flames. The fire, on the top portion and on the blades of the 200-foot turbine, was discovered around 5:30 a.m. by employees of FPL Energy - High Winds. The turbine that caught fire was one of 90 the company maintains in the 6700 block of Birds Landing Road near Rio Vista. Van Culver, high winds plant leader for FPLE, said by early afternoon the company was still assessing the risk of climbing the tower to get a closer look.

March 11, 2008 by Danny Bernardini in The Reporter

A wind turbine caught fire in Birds Landing early Monday, but investigators have yet to identify what caused the flames.

The fire, on the top portion and on the blades of the 200-foot turbine, was discovered around 5:30 a.m. by employees of FPL Energy - High Winds. The turbine that caught fire was one of 90 the company maintains in the 6700 block of Birds Landing Road near Rio Vista. ([image of burning turbine](#))

Van Culver, high winds plant leader for FPLE, said by early afternoon the company was still assessing the risk of climbing the tower to get a closer look.

"We're still investigating the root cause," Culver said. "We're making sure it's secure and there is no risk."

After noticing the fire atop the turbine, Culver said the company notified the fire department which ultimately decided to let the fire burn itself out. Culver said that took about three hours.

While the turbine fire was out by morning, the blades continued to burn throughout the afternoon. Those blades - which extend the height of the turbine about 120 feet - are made of fiberglass and balsa wood and dropped embers as they burned.

Culver said although the instances are rare, turbines do occasionally catch on fire. He was happy no further damage or injuries occurred. General

Manager Kevin Gordon said the estimated damage was \$1.5 million.

Web link: http://www.thereporter.com/news/ci_8531662

Item #493

Turbine burns at Ewington wind farm

March 28, 2008

Credits: Worthington Daily Globe: <http://www.dglobe.com/articles/rss.cfm?id=10344>

Description:

Smoke pours from the top and bottom of one of the wind turbines at the Ewington Wind Farm near the Heron Lake exit north of Interstate 90 Wednesday (Mar 26) morning. The Brewster and Okabena Fire Departments responded to the scene, but upon the advice of Suzlon Wind Energy officials, the fire was allowed to burn itself out. (Brian Korthals/Daily Globe)



Item #505

May 30, 2008 in Daily Globe

The Brewster Fire Department was paged at 2:02 p.m. Thursday to a wind generator fire at the intersection of 350th Avenue and 800th Street in Jackson County. According to fire chief John Garmer, the wind turbine had a "ball of flame" on top when firefighters arrived at the scene. The fire was located at the six-turbine Ewington Wind Farm, [the same site where a wind generator burned two months ago](#). This time, the propeller blades from the turbine came down in the fire, landing in the corn field below. Garmer said the department was at the scene for about a half hour.

Web link: <http://www.dglobe.com/articles/index.cfm?id=12004>

April 3, 2008

Windmill fire under investigation

Emergency calls flooded the Jackson County Law Enforcement Center last Wednesday morning as passers-by on Interstate 90 in western Jackson County witnessed huge plumes of smoke ascending to the clouds. The fire originated from one of the six power generating windmills on the Ewington Township Wind Farm, located south of Okabena just north of I-90.

Personnel from the Jackson County sheriff's office as well as the fire departments from Okabena and Brewster quickly responded and the flames were brought under control.

The towers are operated by Suzlon Wind Energy, whose regional office is in Pipestone.

After the fire was controlled, the scene was turned over to Suzlon officials, who are conducting an investigation.

"We are still investigating a cause," said Suzlon Vice President Ken Glazier. "The fire was controlled quickly and brought to a safe stop. There were no injuries and the damage was limited to the one cell." That cell is the main operating apparatus of the turbine, said Glazier. Depending on what the investigation yields, at least the cell will have to be drastically repaired or replaced for that turbine to be functional again, he said. The other five turbines on the site are operational and were not damaged, he said. Suzlon operates some 10 wind farms in southwest Minnesota. A fire is unusual, said Glazier. "It's certainly unusual, but it's not the first fire we've had," he said. "On that site, we've had those six turbines in operation since 2003 without incident." A damage estimate was not available.

By Ed Gallagher

Lakefield Standard <http://www.lakefieldstandard.com/news/article.asp?>

Item #500

Windmill fire causes \$750,000 in damage

Fire caused an estimated \$750,000 in damage to a windmill on Thursday, the Palm Springs Fire Department said today. ...The top portion of the windmill was on fire and several small spot fires happened because of falling debris. The fire is under investigation.

May 9, 2008 in Desert Sun

Fire caused an estimated \$750,000 in damage to a windmill on Thursday, the Palm Springs Fire Department said today.

Firefighters were called out about 5:55 p.m. to Windmill Farms a mile south of Interstate 10. The top portion of the windmill was on fire and several small spot fires happened because of falling debris. The fire is under investigation.

Web link: <http://www.mydesert.com/apps/pbcs.dll/article?AID=...>

Item #532

Produced September 11, 2008 (Posted September 13, 2008)

Description:

News report of a wind turbine at the Aeolian Park wind energy facility in Spain destroyed by fire. According to Iberdrola, the exact cause of the fire has not been determined, but is believed to be due to mechanical failure. Firemen, police and company personnel were on the scene. A 120 meter buffer around the turbine was established to ensure the safety of people and property near the fire. The fire did not impact the operation of the Aeolian Park in spite of the spectacular visible cloud column rising from the turbine.

YouTube Video - Spain

Item #556

3 workers injured in wind farm fire

An explosion and fire at a wind farm under construction in northeast Nebraska has injured three workers. One man, who was atop a tower when a turbine exploded, received first- and second-degree burns in the fire Tuesday morning. Two others, who were nearby, were treated for smoke inhalation and released.

December 1, 2008 by The Associated Press in Journal Star

An explosion and fire at a wind farm under construction in northeast Nebraska has injured three workers.

One man, who was atop a tower when a turbine exploded, received first- and second-degree burns in the fire Tuesday morning. Two others, who were nearby, were treated for smoke inhalation and released.

Edison Mission Group Inc. is building the 80-megawatt Elkhorn Ridge wind farm north of Bloomfield.

Elkhorn Ridge Wind Farm Edison spokeswoman Susan Olavarria (OL-uh-vehr-EE-uh) says the worker who suffered serious burns was taken to a hospital, but she didn't know his current condition.

Olavarria says all the injured employees worked for subcontractor Vestas Wind Energy. Vestas officials said they don't yet know what happened.

Web link: <http://www.journalstar.com/articles/2008/12/02/news/local/doc49359f3749d5d794744628.txt>



December 3, 2008 by Randy Dockendorf in Yankton Press and Dakotan

Cause of Bloomfield turbine fire still under investigation

Three investigative teams will be coordinated to learn the cause of this week's fire atop a 260-foot wind turbine north of Bloomfield, the state fire marshal's office said Thursday. The fire occurred at one of 27 turbines on the 80-megawatt Elkhorn Ridge wind farm under construction. Once completed, Elkhorn Ridge will become Nebraska's largest wind farm. ...Meanwhile, work has been suspended at the wind farm, Roberts said.

Three investigative teams will be coordinated to learn the cause of this week's fire atop a 260-foot wind turbine north of Bloomfield, the state fire marshal's office said Thursday.

The fire occurred at one of 27 turbines on the 80-megawatt Elkhorn Ridge wind farm under construction. Once completed, Elkhorn Ridge will become Nebraska's largest wind farm.

The fire resulted in the hospitalization of a Vestas Wind Energy worker who suffered burns while working atop the wind turbine. The worker's condition was showing improvement the next day, Vestas spokesman Roby Roberts said.

Another worker on the ground at the time of the fire suffered smoke inhalation but was treated and released, Roberts said.

At this point, there is no indication of how the fire started, said Sean Lindgren of the Nebraska state fire marshal's office in Albion, Neb.

"We do not know of any possible causes," he said.

Investigators have been sent to the scene by the Nebraska fire marshal; the Edison Mission Group of Irvine, Calif., which owns the wind farm; and Vestas, a Danish company with North American headquarters in Portland, Ore., that is responsible for constructing the turbines.

"We are really in a standby mode until all the team members get together from the different companies to do a collaborative effort," Lindgren said.

He was unsure of the time needed for the investigation.

"I don't have any ideas on how long it will take," he said. "It doesn't happen that often to have three (teams)."

The three investigative teams will work jointly, Lindgren said.

"We are getting the teams together and figuring out what the plan is, then move on it," he said. "It kind of depends on the resources and what they gather. We are waiting for the direction that we need to take in a safe manner."

The effort takes on a different dimension because this week's turbine fire is "very unusual," Roberts said.

Edison Mission spokeswoman Susan Olavarria agreed, saying her company has not experienced anything like it before.

"This is my first time in this business that I have ever seen a fire like this," she said. "I have never heard of a fire at a turbine."

Meanwhile, work has been suspended at the wind farm, Roberts said.

"The site is closed while the investigation goes on," he said.

For safety reasons, the site has been sealed off from the general public, Olavarria said.

"We don't feel there is any imminent danger," she said. "It's just to prevent onlookers from coming onto the site."

Bloomfield fire chief Rodger Freeman said his department responded to the call around 11:30 a.m. and remained for about an hour. While he could not confirm the cause of the fire, Freeman said the turbine's cone does contain oil.

Nebraska will triple its wind energy production upon completion of Elkhorn Ridge and the neighboring 42-megawatt Crofton Hills wind farm. The wind farms will sell their electricity to the Nebraska Public Power District.

Elkhorn Ridge was scheduled to become operational this month. However, officials say they are not rushing to put the wind farm into production until the investigation is completed surrounding this week's fire.

Web link: <http://www.yankton.net/articles/2008/12/05/community/doc4938baaa807f7721126663.txt>

Item #609

CADIZ, 7 Ene. (EUROPE PRESS)

Cash of the Partnership of Firemen of the Province of Cadiz today took part in the control and extinction of a registered fire, by causes that are not known, in an electrical substation, center of receptación and distribution of Aeolian energy located in kilometer eight of highway CA-6200, in the municipal term of Alcala of the Gazules (Cadiz).

In an official notice, Firemen explained that they had to go to the place in two occasions, although could not take part until this morning, when a technician of the responsible company cut the electrical fluid and confirmed that the operation did not have danger for the operative one.

According to he said, the fire was choked after flooding the zone affected of foam, according to establishes the action protocol. The fire took place in a center of reception and distribution of Aeolian energy and had produced a flight in the oil tank and also affected a vent? species of evacuation chimney. [The fire occurred in a wind Energy collection and distribution to center and caused to leak in the oil tank...]

Later, the Firemen had to take part in another fire produced in the same Aeolian park of Alcala, in the control panel of a center of transformation located in kilometer 31 of a-2228. In this sense, he indicated that? everything aims at that both incidents are related. [Later, the firefighters had to respond to another fire in the same wind Park in Alcala...] In both cases prevention workings are realised since the Firemen cannot take part until he is not confirmed, on the part of competent technicians, no whom tension are and risk in the intervention does not exist. Both fires are very confined and in inhabited zones? , it aimed. Altogether five firemen with two vehicles moved to the place, a heavy rural fire engine and a vehicle of control. In the extinction workings they used about 15 liters of foam and 1,000 liters of water.

Item #615

Wind turbine burnt out

NATASHA EWENDT

5/02/2009 12:30:00 AM

A WIND farm turbine caught fire at the Cathedral Rocks Wind Farm in the early hours of Tuesday morning.

A fishing boat reported the fire at about 1am, and about 23 MFS and CFS firefighters extinguished the blaze before it spread.

Port Lincoln CFS regional commander Kevin May said on the crews' arrival the turbine housing at the top of the tower was on fire, with some embers falling to the ground.

He said the weather was on the firefighters' side and helped in preventing the fire spreading to nearby vegetation.

The turbine housing was completely destroyed, but the rest of the turbine could be salvageable.

The company said yesterday it expects the damage bill to be about \$2 million, but it would determine an exact amount when it finishes its investigation.

February 4, 2009

The Country Fire Service is being lauded for the quick response to a \$6 million turbine fire at the Cathedral Rocks wind farm.

The fire virtually destroyed the turbine near Port Lincoln on Tuesday morning.

Port Lincoln Mayor, Peter Davis says the fire does not appear suspicious.

A fire cause was still to be confirmed at the time of interview.

"It's probably under heat stress or something, there may have been a crook bearing in it who knows.

"To their credit the CFS got on top of it instantly.

"I mean it's not an act of god it's probably a mechanical or an electrical failure and it's most unfortunate for the company", he said.

Occupants of a boat raised the alarm and the fire was well under way by the time CFS crews attended to the fire just before one am.

Port Lincoln CFS Captain, Greg Napier, says the fire was confined to the wind turbine and the small surrounding area.

"(It was) a couple of hundred meters if you put it all together, just various spots, the crews got out quite quickly and got onto the fire... before it had an opportunity to build or create anything of concern", he said.

Mayor Davis is concerned that similar incidents are putting extra strain on power supplies already under pressure from the State's heat wave.

"It illustrates the fragility of our electrical supply system," he said.

"You look at Port Augusta, Playford down at Port Adelaide, the Torrens Island power station, all our equipment is antiquated.

"I mean we're putting Adelaide on rationed power these days, you know, they're not even game to say which suburb or circuit area they're going to close down in the next heat wave.

"What the hell is going on?".

Fire safety authorities are still investigating the cause of the fire.

Tom Henderson

ABC North and West SA

<http://www.abc.net.au/local/stories/2009/02/04/2482542.htm>

Cathedral Rocks Wind Farm turbine fire

February 03, 2009 07:40am

A \$6 MILLION wind turbine has caught fire near Port Lincoln, starting blazes on the ground as embers fall.

The fire, at the Cathedral Rocks Wind Farm about 30km southwest of the town, was first noticed by a boat about 1am.

The turbine is alight halfway up its 60m structure, making it difficult for the 14 Country Fire Service firefighters trying to deal with it to extinguish the blaze.

They are also busy controlling the spot fires, but consider the situation to be safe.

The cause of the blaze is as yet unknown.

<http://www.news.com.au/adelaidenow/story/0,22606,25001046-2682,00.html>

Turbine to be rebuilt after fire

[[Alternate short URL for linking](#) • [HOME](#)]

» Translation tools are available at the bottom of the page «

Credit: Natasha Ewendt, Port Lincoln Times, www.portlincolntimes.com.au 4 February 2010

The turbine that was burnt out in an electrical fire at the Cathedral Rocks Wind Farm will be replaced next week, a year after the fire.

Roaring 40s corporate services general manager Steve Jackman said the turbine's tower would be trucked in from Port Adelaide on or around February 12, and erected on February 13.

Two blades are due to arrive on site on February 15 or 16 and the last blade on February 17.

The Nacelle, the unit containing the generator, and the rotor hub to connect the blades, are already on site and will be fitted to the tower after February 18, with the turbine to be commissioned in early March.

Mr Jackman said the tower had been salvageable after the fire and was refurbished in Adelaide, but the rest of the parts had been destroyed and needed replacing.

He said the company would have liked to have seen the turbine replaced much sooner, but with parts having to be shipped from Denmark, it had taken longer than expected.

Having one of the 33 turbines out of operation for a year had affected wind generation and income, but Roaring 40s was looking forward to seeing an increase in energy capacity once the turbine was operating again.

Mr Jackman said the wind farm was performing well, with the turbines operating at their greatest efficiency since the farm opened in 2005.

Item #637

May 22, 2009 • [Pennsylvania](#)

Locust Ridge wind turbine fire still under investigation

The May 14 fire at the skyscraper-size Turbine 12 at the Locust Ridge I commercial wind farm in Mahanoy Township occurred during routine maintenance, according to a company official.

Jan Johnson, corporate communications director for Iberdrola Renewables in Portland, Ore., which owns the wind farm, said Thursday that Turbine 12 is still shut down. When asked how the fire started, she said, "We're still investigating."

"It damaged the top of the tower. The fire was in the nacelle, the housing up there, the tractor-trailer sized box at the top that holds the generator. We're working with the turbine manufacturer to figure out what happened and then we'll move forward," Paul Copleman, spokesman for Iberdrola Renewables, Wayne, said Thursday.

Manufactured by Gamesa Corp. in Pamplona, Spain, the 2 megawatt, Gamesa G87 turbine has a tower measuring 256 feet and three blades, each 135 feet long. With blades fully extended, it stands 407 feet high. In service since March 2007, it's one of the original 13 turbines that are part of Locust Ridge I, Joseph B. Green, Weston Place, the wind farm project manager, said previously.

The fire occurred at Turbine 12 between 1 and 1:41 p.m. May 14 while Gamesa Corp. workers were conducting a 24-month scheduled maintenance on the turbine, Johnson said.

"When they're doing maintenance, they turn the machines off. The crews climb the towers and do their work. Then they restart them," Johnson said.

The fire occurred in the gear box.

"It's kind of the guts of the machine. The fire caused substantial damage to the nacelle and rotor assembly. No personnel were in the turbine," Johnson said.

"No one was injured and no one was inside the turbine when it happened," Copleman said.

The fire was reported to the Schuylkill County Communications Center at 1:41 p.m. May 14. Firefighters from Mahanoy City responded and were assisted by tankers from Rush, East Union and Butler townships. Firefighters left the scene at 3:46 p.m., according to a supervisor at the center.

Johnson said she's not sure when Turbine 12 will be functioning again.

"A specialist team was being dispatched from Spain to assist with removal of the damaged components. We're not sure when all the parts will be in to do the repairs," she said.

Fires at commercial wind mills are "pretty rare," according to Copleman.

"There are, I think, over 25,000 modern wind turbines in operation just in the U.S. and — to our knowledge in working in the industry on a whole host of safety measures and engineering standards — this is pretty rare," Copleman said.

BY STEPHEN J. PYTAK
STAFF WRITER

[The Republican-Herald](#)

Item #660

Kent Hills Wind Turbine Fire



Elgin Fire Department and Employees of TransAlta, the power generation company that runs the farm, responded to the fire at about 9 a.m. Saturday and contained it.

Jason Edworthy, a spokesman for the Alberta-based company, said that three TransAlta employees who work on site were alerted by the turbine's sensor that there was a problem.

They went to the scene but saw no fire and returned to their office, only to receive another automated message, which prompted them to return to the turbine again.

Edworthy said a passer-by saw smoke and called the fire department

Officials haven't been able to confirm the cause of the fire yet.

Vestas, the company that supplies the turbines, will have a team on site today to try and determine what happened.

"Apparently, this is the first time this has ever happened on this particular model of turbine, so they're obviously quite concerned," said Edworthy.

Fire Departments from Riverview and Salisbury also responded to the call.

A single turbine is estimated to cost between \$4 million and \$5 million dollars.

The wind farm was commissioned in Dec. 31, 2008.

The turbine closest to the burned unit will be shut down as a precaution, but the rest of the farm will remain operating, Edworthy said.

No one was injured in the fire.

Item #686

A transformer at the Maple Ridge Wind Farm's substation off Rector Road was destroyed by fire late Monday afternoon. Martinsburg firefighters were dispatched to the substation about 5 p.m. but had to wait until the facility was shut down before extinguishing the blaze, said Lewis County Fire Coordinator James M. Martin. ...The Columbus Day fire was the second transformer fire at the site, with a similar incident occurring July 4, 2007. In that case, 491 gallons of mineral oil leaked from the damaged transformer

October 14, 2009 by Steve Virkler in Watertown Daily News

WEST MARTINSBURG - A transformer at the Maple Ridge Wind Farm's substation off Rector Road was destroyed by fire late Monday afternoon.

Martinsburg firefighters were dispatched to the substation about 5 p.m. but had to wait until the facility was shut down before extinguishing the blaze, said Lewis County Fire Coordinator James M. Martin.

The fire was contained to the damaged part, located outside the control building, Mr. Martin said.

"It didn't get inside, and it didn't get into the other transformers," he said.

The Columbus Day fire was the second transformer fire at the site, with a similar incident occurring July 4, 2007. In that case, 491 gallons of mineral oil leaked from the damaged transformer and temporarily contaminated a nearby residential well. About 15 other wells also were tested, but none was affected.

Some oil also leaked into the soil Monday, although the amount hasn't been determined yet, said state Department of Environmental Conservation Region 6 spokesman Stephen W. Litwhiler. The transformer had a capacity of 550 gallons, but some of the oil burned, remained inside the unit or was recovered before it seeped into the soil.

The wind farm retained a firm Monday night to immediately begin excavation of contaminated soil, and DEC will continue to investigate and monitor the situation, Mr. Litwhiler said.

DEC officials on Tuesday were attempting to contact the homeowner whose well had been contaminated in 2007 to notify him of the incident, he said.

Attempts to reach wind farm officials for comment Tuesday afternoon were unsuccessful.

Item #693

Froidfond: aeolian one harming by a fire

News items on Thursday, October 22, 2009

In the field of aeolian having located on horseback on the villages of Garnache and Froidfond, one of her took late Wednesday evening, at about 20 h 30. Fire declared itself in the located motor everything in the top of this aeolian on the territory froidfondais. The firefighters of Challans, Saint-Etienne-du-Bois and Garnache intervened.

October 24, 2009

Further to fire of aeolian one on Wednesday in Froidfond, on the site of Espinassière, the Company of the wind wants to inform, in a press release, that this fire " did not draw away damage for the riverians and environment. It is a technical problem which seems at the origin of the disaster. The experts are on place to try to determine origin. Aeolian connecting in the post of Froidfond are going to be the object of a check deepened before being delayed in service ".

Photos: Fédération Environnement Durable (FED)





Item #727

February 15, 2010 by Darrell Cole in Amherst Daily News

AMHERST - For the third time since it went online, the wind turbine at the RCMP detachment in West Amherst is on the fritz.

"We had another fire in the electrical panel and we've shut it down," Staff Sgt. Frank Kingston of the Cumberland RCMP said Friday. "It was the same panel in which we had a fire before. It was an electrical fire."

The cause of the fire is unknown.

The centerpiece of the new detachment when it opened in 2005, the 80-foot tall turbine was expected to save the RCMP about \$13,000 annually in energy costs and reduce greenhouse gases by 150 tonnes of carbon dioxide.

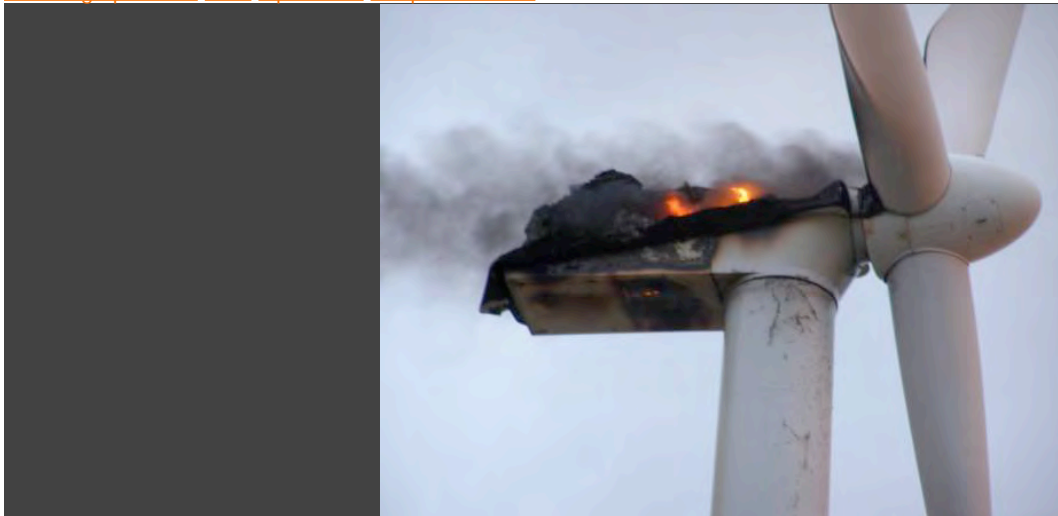
Kingston said engineers were onsite last week to review the situation and he's awaiting their report. The turbine will not go back online the repairs are complete.

The turbine, which cost \$225,000 to erect, broke down during a 2007 electrical storm and failed in 2008 after a fire in an electrical panel.

Item #893

10. april 2010 09:45 - Af [ALEXANDER DORNWIRTH](#), Fyns Amts Avis

[Hold mig opdateret](#) [Print](#) [Tip en ven](#) [Del på Facebook](#)



Seniorkonsulent Ole Andersen fra Energicenter Fyn fotograferede vindmøllen ved Nedergård, da den brændte.
Foto: PRIVATFOTO

Bøstrup: Friday at 18:15 broke a windmill at Nedergård suddenly on fire.

- All the electronic mill in the house is completely burned away, he tells of Funen county newspaper.

As the fire brigade turned up shortly after the fire, they could see that there was nothing to do.

52 recommend this article

- It burned simply too high and we decided that we just had to let it burn out. Since there was no danger to human life, "says Torben Qvist stint.

The windmill is 50 meters high and stood together with two other wind turbines of this type.

Normally, the lifetime of a turbine of the type at least 20 years.

- It is indeed very rare, there's a fire in a wind turbine, says senior consultant Ole Andersen from Energy Center Fyn, which in 2002 put the mill up.

According to Ole Andersen has served turbine costs in to the people who have invested in it.

- But it is a shame because it is only now that it would begin to be profitable, "he said.

Item #945

19/09/2010 | Updated: 11:31 Comments (208) Two wind turbines were packed and caught fire this morning in the south of Drôme, and one of them has "exploded" causing starting fire surrounding vegetation, have we learned from the firefighters. The two aircraft, 45 m high and remote from each other about 3 km, are located on the town of Rochefort-en-Valdaine, in an uninhabited area. "Obviously, they are packed, after a strong gust of wind sector", it was reported to the Area Fire and Rescue Department.

"We have established a security perimeter because there are risks of debris, but were ordered not to intervene" on the machines, the fire being in the head wind at the top of the masts, have stated the fire department.

The head and the blades of one of the two machines have been completely pulverized. According to police, these devices are equipped with "automatic hydraulic brake" that would not have served its purpose but the accidental origin of the incident would not doubt. "We know nothing about" the causes of the incident, said to her hand, a member of the Maintenance of the park, reached by telephone by AFP, "the safety systems worked on all others."

"It whistled a lot," he told AFP Jean-Marie Villard, a resident of the nearby town of Espeluche, which was quickly on scene to report the damage. "Debris was thrown, it could ignite, there is wood everywhere and there are many mistral," he added, noting that "this is the second time it happens," a similar incident s 'being' already happened on the park in 2004.

<http://www.lefigaro.fr/flash-actu/2010/09/19/97001-20100919FILWWW00045-deux-eoliennes-ont-pris-feu-dans-la-drome.php>

Item #600 -- Additional Article

Sioux Falls utility worker dies in fall from Minnesota wind tower

Man, 26, installing turbine before fire broke out; 2 others injured

From Staff & Wire Reports

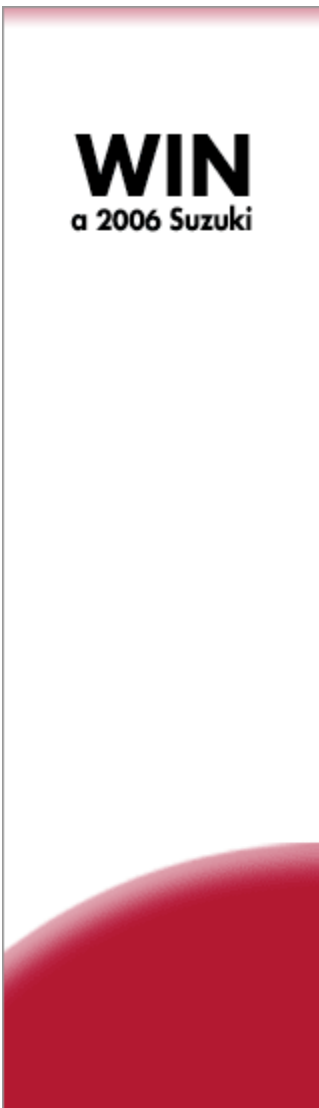
Article Published: 11/12/05

CHANDLER, Minn. - A Sioux Falls man was killed after falling more than 200 feet from a wind tower after it caught fire Friday morning near Chandler, authorities said.

Benjamin James Thovson, 26, died at the scene after falling about 210 feet, Murray County (Minn.) sheriff's deputy Randy Donahue said.

The victim was installing a Suzlon Wind Energy Corp. wind turbine, according to a statement released Friday evening by Suzlon and another company, Gary, S.D.-based Energy Maintenance Service.

ADVERTISEMENT

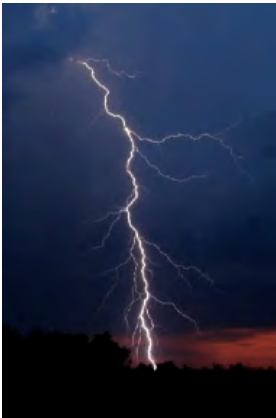


Item #601- Additional Article

December 29, 2008, 8:12 am

When Lightning Strikes Wind Turbines

By [Kate Galbraith](#)



This has been known to fry wind turbines. (Photo: The Associated Press)

With snow, ice and frigid weather, winter creates complications for renewable energy, as I [wrote last week](#). But for Ralph Brokaw, a Wyoming rancher with both cows and wind turbines on his land, the worst hazard is not the ice that his blades can throw off in the winter.

Rather, it is lightning strikes on the towers, which usually occur in summer when there are more storms.

The effect is spectacular — and scary. “It will explode those blades, and they’ll throw chunks of blade several hundred feet,” Mr. Brokaw, a member of his local fire department, told me over the telephone.

As the chunks fall, the firefighters douse them with water. Otherwise, “There’s really not much you can do with a turbine that’s 200 foot tall and on fire,” he said.

Mr. Brokaw said that in the past five years he has been called to help put out two or three turbine fires. He said that “there’s oil and gearboxes and a tremendous amount of wiring” in the generator — so even though the turbines are very well-grounded, they can sometimes light up.

<http://greeninc.blogs.nytimes.com/2008/12/29/when-lightening-strikes-wind-turbines/>

Item #602- Additional Article

December 1, 2009



A photo made available on 02 December 2009 showing a wind turbine burning in Hanstedt II near Uelzen, Germany on 01 December 2009.

The fire caused a material damage amounting to 750,000 euro and probably developed due to a technical fault, police said.

Photo copyright by EPA/PHILIPP SCHULZE

Read more: <http://www.monstersandcritics.com/blogs/theworldinpictures/2009/12/02/wind-turbine-on-fire/#ixzz0Z1iB4GKz>

Item #603- Additional Article

Suzlon turbine explodes in Brazil

December 2, 2009



According to Edison over speed condition that caused a small fire in the nacelle and burned the turbine.

Turbines commissioned June 2009
50 - Suzlon 88

Description:

One of the 50 turbines that makes up the wind farm Praia Formosa (105 MW) in Brazil exploded losing one of its blades. The wind tower that failed was one of the closest to houses in the region.

Item #604- Additional Article

PSC probes wind tower collapse, fire

By **BRIAN NEARING**, Staff writer

First published in print: Thursday, March 12, 2009

State investigators from the Public Service Commission are looking into the fiery collapse of a wind power turbine at a turbine farm in Clinton County.

A preliminary examination by Noble Environmental Power, owner of the \$200 million, 65-turbine Altona Wind Park, and General Electric Co., manufacturer of the 1.5-megawatt turbines, found "wiring anomalies" prevented two turbines from shutting down as designed during a power outage.

On Friday morning, one tower collapsed and started a small fire in snow-covered woods, while the other faulty tower was damaged but remained standing, according to a statement from Noble. Debris from the collapsed tower was flung up to a quarter-mile away, according to published reports. No one was hurt.

PSC officials want Noble and General Electric to share the investigations into the towers, blades and generators, as well as any analysis of how far the debris traveled, commission spokesman James Denn said Wednesday. The state also wants to know how many turbines have been restarted since the incident, and information on wind and other weather around the turbines leading up to the collapse.

It was the first collapse of a wind turbine in New York state. The three-bladed General Electrical 1.5 SLE megawatt turbines are between 200 and 280 feet high at the hub where the rotor blades connect, and have a rotor diameter of 250 feet, according to specifications on General Electric's Web site.

Each turbine has a braking system to bring the blades to a halt, including an electromechanical pitch control for each blade, as well as an hydraulic parking brake, according to GE.

Noble spokeswoman Maggy Wisniewski declined comment when asked to describe how the braking systems are meant to function, or what happened to cause a power outage at the wind farm.

According to the National Weather Service in Burlington, Vt., there was no high-wind advisory warning in place for Clinton County on Friday.

The remaining 63 turbines at Altona shut down as designed Friday, and are being restarted once GE finishes tests to ensure the same wiring problems are not present, according to Noble's news release.

The park produces electricity to serve about 32,500 homes.

Noble, which is privately owned and based in Essex, Conn., also operates wind parks in Bellmont, Franklin County; Chateaugay, Franklin County; and Clinton and Ellenburg, Clinton County. It also operated in seven other states.

Brian Nearing can be reached at 454-5094 or by email at bnearing@timesunion.com.

Read more: <http://www.timesunion.com/AspStories/story.asp?storyID=778979&category=REGION#ixzz0jIWzxFJY>

Item #605- Additional Article

Can't fight the fire

BY ELIZABETH SWEETMAN

04 Nov, 2010 12:30 AM

CAPE JERVIS – Do you call the CFS in the event of a wind turbine fire?

While it might seem like the right thing to do, according to group officer for the Southern Fleurieu CFS Mr Greg Crawford, there is little to nothing the CFS can do in this situation, as officers found out at the weekend.

Last Saturday at 2.33 pm, the Southern Fleurieu CFS group was alerted to a fire at the Starfish Hill Wind Farm, near Cape Jervis, in which a turbine had caught alight.

The fire caused \$3,000,000 in damage.

On arrival, CFS officers could do little but watch the blaze from half a kilometre away, as the situation was deemed too dangerous to approach.

"There was not a damn thing you could do about it," said Mr Crawford of the turbine fire.

When Work Safe arrived to the scene, CFS officers were told to retreat a further 500 metres away from the fire, as the blades continued to spin.

"There were tips of the blades flying some distance," said Mr Crawford.

"You could go no closer than a kilometre away."

CFS officers kept watch for spot fires, but were unable to extinguish those close to the turbine.

Water cannot be used to extinguish the cause of a wind turbine fire, as the turbine's hub contains a large electrical network and from ground to blade tip, the turbines stand at 100 metres tall.

In the event of a wind turbine fire during the fire season, aerial support could aid CFS by extinguishing fires caused by embers around the turbine.

Mr Crawford said the Southern Fleurieu CFS Group had received a bulletin from management detailing that little can be done in the event of a wind turbine fire due to the threat it poses to officers.

He said the Southern Fleurieu CFS Group is in ongoing discussions with the regional CFS officer and representatives from Starfish Hill Wind Farm on the issue.

MORE PAGE 7

A spokesperson for Transfield Services Infrastructure Fund, the organisation in charge of Starfish Hill Wind Farm, said the company has a huge emphasis on safety.

He said a Work Safe team are on site, monitoring operations closely and all safety measures are in place.

"As far as I'm aware, all safety precautions were taken (during the incident)," said the spokesperson.

He said the blades have now been clamped and the safety risk has been significantly alleviated.

Southern Fleurieu resident Barry Webb captured a photo of the destroyed turbine on Sunday and said he, along with many, have concerns of the high danger risks a turbine fire could pose to communities.

"They (wind turbines) are normally located in areas that are not easily accessible (to emergency crews)," said Mr Webb.

"The situation has the potential to be quite serious."

The Starfish Hill wind turbine fire is the third in South Australia since 2006, with a blaze at the Lake Bonney Wind Farm in January 2006, and another at Cathedral Rocks Wind Farm, Port Lincoln in February 2009.

Both occurred during peak fire season.

A spokesperson for the District Council of Yankalilla said while council can provide advice to landowners concerned over the issue, the Starfish Hill Wind Farm is not council's responsibility.

<http://www.victorhbartimes.com.au/news/local/news/general/cant-fight-the-fire/1987235.aspx>



Item #606- Only Photos (no official news report)

July 30th, 2008 at 1:30 pm - Buxtehude-Hedendorf (Lower Saxony, Germany)



[\[+\] Click to enlarge](#)



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Item #607

Wind burn: Electrical problem expected as cause in windmill fire

[[Alternate short URL for linking](#) • [HOME](#)]

» *Translation tools are available at the bottom of the page* «

Credit: Suann Musick, The News, www.ngnews.ca 31 January 2011

MILLSVILLE – Trenton resident Doug Stewart knew something was wrong early this morning when he pointed his binoculars towards his sister's house in Millsville and saw nothing but black smoke.

Stewart, who lives near the Trenton Airport, said he is often bird watching and looking at the windmills on Fitzpatrick Mountain, but instead of spotting blades and towers 32 kilometres away, all he saw was smoke.

"I am always looking that way and it didn't look too bright this morning," he said. "It was quite black."

Stewart called the RCMP who told him he was the second person to report the smoke. He also called his sister Donna Sutherland, who lives two kilometres away from the windmills, to see what was happening.

"I didn't notice it at first," she said. "There is a spruce tree in the way so I had to go outside and take a look. Once I walked outside, I saw the smoke."

Central West River resident Kevin Hawkes said he knew there was a problem when he saw black smoke while driving home from work early yesterday morning.

"I went home and grabbed my camera but it was about 15 or 20 minutes before I got there," he said. "By then it was pretty much out."

Scotsburn Fire Department arrived on the scene at Tower Road in Millsville about 7:30 p.m. yesterday after someone working at the site reported smoke coming from the motor compartment of the wind turbine.

The turbines are owned by Shear Wind Inc. and were constructed on Fitzpatrick Mountain about four years ago.

Ian Tillard, chief operating officer for Shear Wind, said it took about an hour for the fire to burn itself out. In such cases, he said, the turbines are designed to stop and de-energize so there is little the fire department needs to do other than keep the area clear underneath it.

Tillard said the Scotsburn Department responded in record time and provided the support the company needed, but he acknowledged the company will have to work with local firefighters in the future about responding to such situations.

"We have done a lot of work with fire departments near the Glen Dhu site and it's apparent we need to do that with the Scotsburn Fire Department," he said. "Fires like this are extremely rare on these units, but there are concerns in the summer with forest fires and public safety."

Tillard said the area around the damaged windmill has been cordoned off and the local snowmobile club has been notified since there are some trails on the site.

He suspects the fire was electrical in nature, but won't know the exact cause until it is investigated by the company. He said the components damaged by the early morning fire will be replaced.





<http://www.ngnews.ca/News/Local/2011-01-31/article-2187158/Electrical-problem-expected-as-cause-in-windmill-fire/1>

Jacquelyn Kitchen - FW: Alta East Wind Project

From: "Childers, Jeffery K" <jchilders@blm.gov>
To: Jacquelyn Kitchen <kitchenj@co.kern.ca.us>, Negar Vahidi <nvahidi@aspeneg.com>, "Hedy Koczwara (hkoczwara@aspeneg.com)" <hkoczwara@aspeneg.com>
Date: 7/9/2012 8:45 AM
Subject: FW: Alta East Wind Project

Jeffery Childers, MPA
 PM – CDD – RECO
 951.697-5308 Desk
 951.807.6737 Cell

From: Dave Grant [mailto:mattolcraftsman@gmail.com]
Sent: Monday, July 09, 2012 7:22 AM
To: Childers, Jeffery K
Subject: Alta East Wind Project

Dear Representative of BLM,

I strongly feel that the environmental impacts of industrial wind turbines have not fully been researched. The amount of steel, concrete, carbon fiber and even neodymium magnets in each wind turbine are atrocious. Two tons of rare earth magnets are in each turbine, to produce this material makes radioactive waste.

Bird kills are much higher than recorded, wind farms are not open to the public and bird counts are not taken everyday. We are slaughtering our avian species for unreliable, intermittent energy that requires back up when the wind is not blowing at the proper speed.

Turbines are meant to have only a twenty year lifespan, that is not very long considering the amount of materials that go into making a turbine. They require constant maintenance. Blades have to be regularly inspected, a dangerous job done by men two hundred and fifty feet in the air hanging by ropes. Two hundred and fifty gallons of oil must be replaced in each turbine every other year. Gear housings last about 5 years, large equipment must be brought in to replace these parts.

The noise and low frequency sound waves from turbines have been proven to create health problems in humans. What in the world are they doing to the wildlife, the reptiles, the insects. We don't know and wind farms don't want us to find out.

I believe that we could meet our renewable energy needs more adequately by not industrializing out wild lands. Wind turbines are a source of revenue more than a source of energy. People installing solar panels on their roofs would supply much more renewable energy to the grid and not require transmission lines and large industrial machines. Solar panels don't kill birds or any other kind of wildlife.

Industrialization is not the answer to our energy needs, localization and independent power producers is our future.

Sincerely,

David Grant

--

David Grant
Woodworker, Craftsman,
Historic Preservation & Restoration
Petrolia, California 95558
707-629-3622



www.JohnJasonChun.com

DOCUMENT DEPOSITS
Fax 888-595-6299
repo4sale@yahoo.com

Phone#1-949-254-3179 & 1-888-532-7999
Facebook & Twitter: John Jason Chun
Po Box 7249 Newport Beach Ca 92658

7-1-2012

WORLDWIDE COMMUNICATION NETWORK

1 March 2012, 1 Jan 2012, 1 Nov 2011, 1 Sept 2011, 28 July 2011

CertMailReturnReceipt: 7008-3230-0002-8039-9635 to: Horizon Wind Energy Attn: Tim Marvich Project Manager & Johnny Casana Project Developer, 1526 Blake St. #200 Denver Co 80202

18 July 2011 CertMailReturnReceipt: 7008-3230-0002-8039-9611 (triplicate)

Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 Bak, Ca 93301

AltaEast Wind Energy Project PP11212 & Parcel Apn#224-450-02-00-9

I will approve this project if I have Paved Road access to each of the ¼ parts of this property, including all Utilities. Aka, I will subdivide this property into 4 pieces and Road access to all 4 pieces must be Provided with all utilities available to all 4 pieces.

See attached parcel map with 4 parcels...

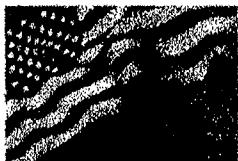
Yours truly,


JohnJasonChun

PO Box 7249

Newport Beach CA 92658

Cash4acres@Gmail.com



www.JohnJasonChun.com

DOCUMENT DEPOSITS
Fax 888-595-6299
repo4sale@yahoo.com

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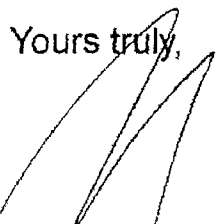
Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 Bak, Ca 93301

AltaEast Wind Energy Project PP11212 & Parcel Apm#224-450-02-00-9

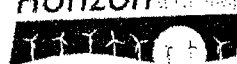
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See attached parcel map with 4 parcels...

Yours truly,


JohnJasonChun
PO Box 7249
Newport Beach CA 92658
Cash4acres@Gmail.com

Horizon WIND ENERGY
 Johnny Casana
Project Developer

Horizon WIND ENERGY
 Tim Marvich
Project Manager
1526 Blake Street, Suite 200
Denver, Colorado 80202
303.568.1700 main
303.568.1699 fax
510.292.0246 mobile
tim.marvich@horizonwind.com
www.horizonwind.com

7008 3230 0002 8039 9635

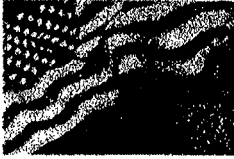
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| Postage & Delivery Fee | 6.43 | | |
| ABOVE HORIZON WIND ENERGY 1526 BLAKE ST #200 DENVER, CO 80202 | | | |

7-28-2011

MORE MAILINGS

(3X) NOV 1, 2011
(2X) JAN 2012

(2X) March 2012



www.JohnJasonChun.com

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repo4sale@yahoo.com

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18 July 2011 CertMailReturnReceipt:7008-3230-0002-8039-9611 (triplicate) NOV 1, 2011

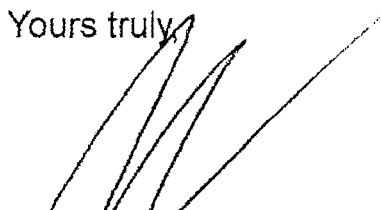
Kern Cty Planning & Comm. Dev. Dept. 2700 M Street #100 BAK, Ca 93301

AltaEast Wind Energy Project PP11212 & Parcel Apn#224-450-02-00-9

I will approve this project if I have Paved Road access to each of the $\frac{1}{4}$ parts of this property, including all Utilities. Aka, I will subdivide this property into 4 pieces and Road access to all 4 pieces must be Provided with all utilities available to all 4 pieces.

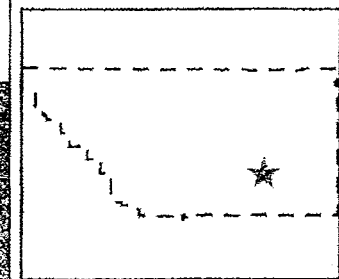
See attached parcel map with 4 parcels...

Yours truly,


John Jason Chun
PO Box 7249
Newport Beach CA 92658
Cash4acres@Gmail.com

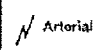
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| Return Receipt Fee (Endorsement Required) | 2.30 |
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| Postmark Here | |
| 7-19-2011 | |
| Kern County Planning & Comm Dev Dept | |
| 2700 M Street #100 | |
| BAK CA 93301 | |
| PS Form 3800, August 2005 | |
| See Reverse for Instructions | |

70acres

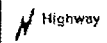


Legend

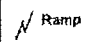
Roads



Collector



Local

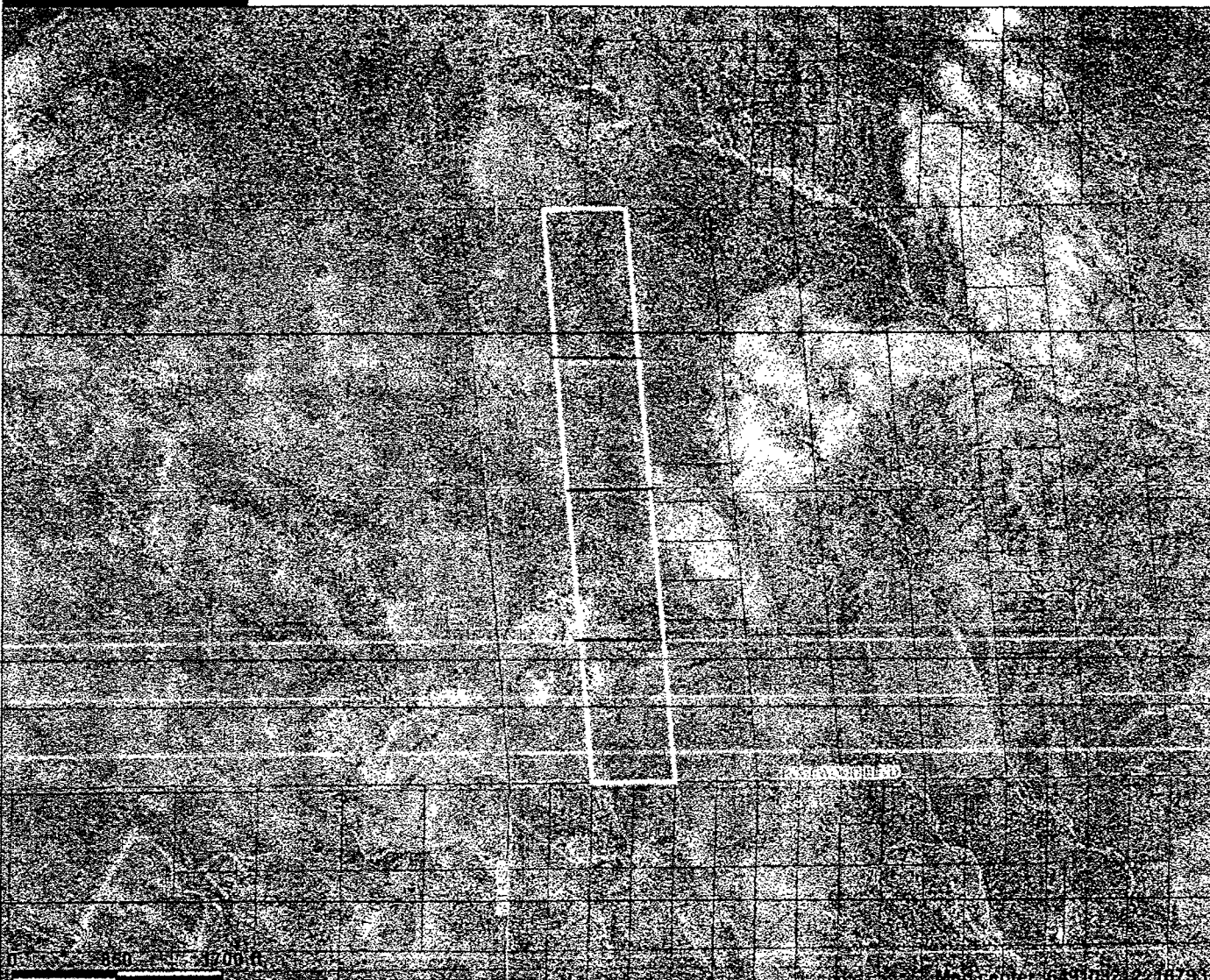


Unpaved



Assessment Parcels

Aerial Photo 2008



0 850 1700 ft



Scale: 1:14,769

This map is a user-generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: 224-450-02-00-9
john jason chun
Po Box 7249
Newport Beach Ca 92658

**PLANNING AND COMMUNITY
DEVELOPMENT DEPARTMENT**

Lorelei H. Oviatt, AICP, Director

2700 "M" STREET, SUITE 100
BAKERSFIELD, CA 93301-2323
Phone: (861) 862-8600
FAX: (661) 862-8601 TTY Relay 1-800-735-2929
E-Mail: planning@co.kern.ca.us
Web Address: www.co.kern.ca.us/planning



DEVELOPMENT SERVICES AGENCY

Ted James, AICP, DSA DIRECTOR
Administrative Operations
Engineering, Surveying and Permit Services
Planning and Community Development
Roads

DATE: July 15, 2011

TO: Surrounding Property Owners within
1,000 Feet

FROM: Kern County Planning and Community
Development Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

RE: Notice of Preparation/Notice of Intent to prepare a joint Environmental Impact Report/
Environmental Impact Statement for the Rising Tree Wind Energy Project by Rising Tree
Wind Farm, LLC. (PP11240)

Dear Sir or Madam:

The Kern County Planning and Community Development Department as Lead Agency (per CEQA Guidelines Section 15052) and the U.S. Bureau of Land Management (BLM), as the federal lead agency, will direct the preparation of a joint Environmental Impact Report (per CEQA Guidelines Section 15161) and an Environmental Impact Statement (EIS), referred to as an EIR/EIS, for the Alta East Wind Project proposed by Alta Windpower Development, LLC (Project Proponent). The EIR/EIS will be prepared to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

The purpose of this letter is to notify surrounding property owners within 1,000 feet of the project boundaries of the preparation of the intent to prepare a Draft EIR/EIS. A copy of the Notice of Preparation (NOP)/ Notice of Intent (NOI) prepared for this project is available for viewing at the following Kern County website: <http://www.co.kern.ca.us/planning/noticeprep.asp>. The NOP/NOI is also available for review at the Planning and Community Development Department, located at 2700 "M" Street, Suite 100, Bakersfield, CA 93301.

The NOP/NOI is the first stage in the EIR/EIS process. The purpose of the NOP/NOI is to describe the proposed project, specify the project location, and to identify the potential environmental impacts of the project so that Responsible Agencies and interested persons can provide a meaningful response related to potential environmental concerns that should be analyzed in the EIR/EIS.

You are invited to view the NOP/NOI and submit comments regarding this project should you wish to do so. Due to the limits mandated by State law, your response must be received by **August 16, 2011 at 5pm**. In addition, comments can be submitted at a **scoping meeting** that will be held at the Kern County Mojave Veteran's Building on **August 4, 2011 at 5:00pm**. The Mojave Veterans Building is located at 15580 O Street in Mojave, CA.

Please be advised that any comments received after August 15, 2011 will still be included in the public record for this project and will be made available to decision makers when this project is scheduled for consideration at a public hearing. Please also be advised that you will receive an additional notice in the mail once a hearing date is scheduled for the project and you will have additional opportunities to submit comments at that time.

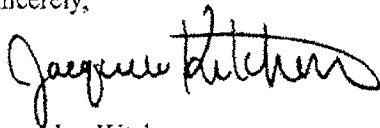
PROJECT TITLE: MDH 08-11; Rising Tree Wind Farm Project by Rising Tree Wind Farm, LLC; General Plan Amendment 2, Zone Map 180; General Plan Amendment 8, Zone Map 197; Specific Plan Amendment 1,

PROJECT LOCATION: The project is located 2 miles west of the intersection of Highway 58 and Highway 14 in the Mojave Desert and is within the Tehachapi Wind Resource Area (TWRA) of eastern Kern County; Located within in San Bernardino Base Meridian and Township 11 North, Range 13 West, Section 3; Township 12 North, Range 13 West, Section 34, Township 12 North, Range 12 West, Section 31, Township 32 South, Range 35 East, Sections 26-28, 32-35.

PROJECT DESCRIPTION: The project is a renewable energy development that would generate up to 360 megawatts (MW) of electricity through the use of wind power on a 3,200-acre project site. The project proponent is requesting: (a) a change in zone classification from the E (20) (Estate 20 acres) District and the A-1 (Limited Agriculture) District to the A (Exclusive Agriculture) District, to the A WE (Exclusive Agriculture, Wind Energy Combining) District and to the A FP (Exclusive Agriculture, Floodplain Combining) District in Map 168, (b) a change in zone classification from A-1 to A and A WE in Map 180, (c) a change in zone classification from E (20) to A and A WE in Map 180, (d) a change in zone classification from A-1 to A and A WE in Map 179, (e) a change in zone classification from A-1 to A in Map 197, (f) amendments to the Kern County General Plan to eliminate section and mid-section line road reservations within Maps 168, 168-27, 179, and 180, and (g) a conditional use permit to allow for the use of a temporary concrete batch plant during construction of the wind energy facility. The requested applications would also permit construction of wind ancillary facilities and supporting infrastructure, and a concrete batch plant to provide concrete and materials for turbine, substation, and building foundations. Permanent facilities would include up to 120 wind turbine generators, service roads, a power collection system, communication cables, overhead and underground transmission lines, electrical switchyards, project substations, meteorological towers, and operations & maintenance facilities.

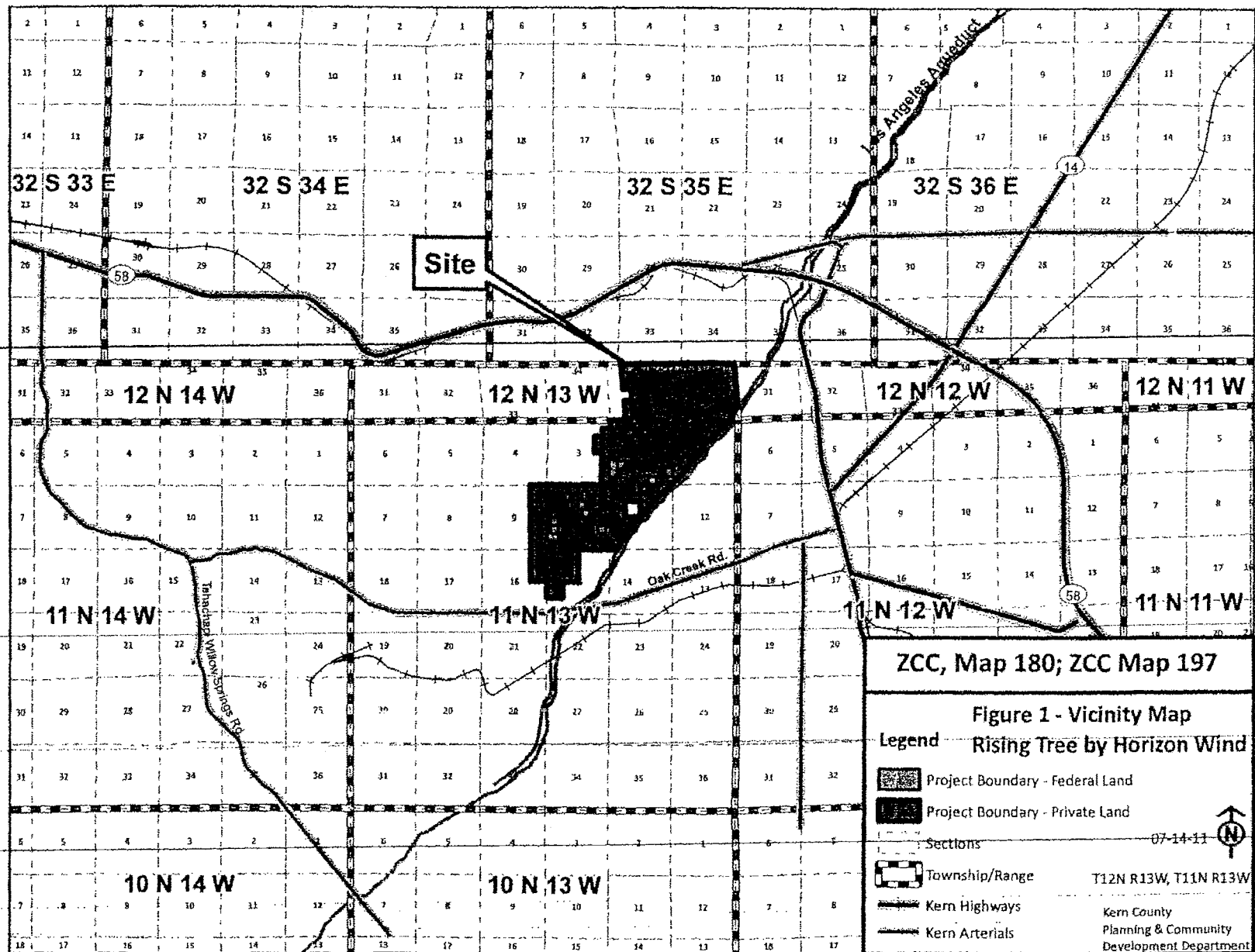
Should you have any questions regarding this project, or the NOP/NOI, please feel free to contact the project manager assigned to this case, Jacquelyn Kitchen, directly at (661) 862-8619 or email me at KitchenJ@co.kern.ca.us.

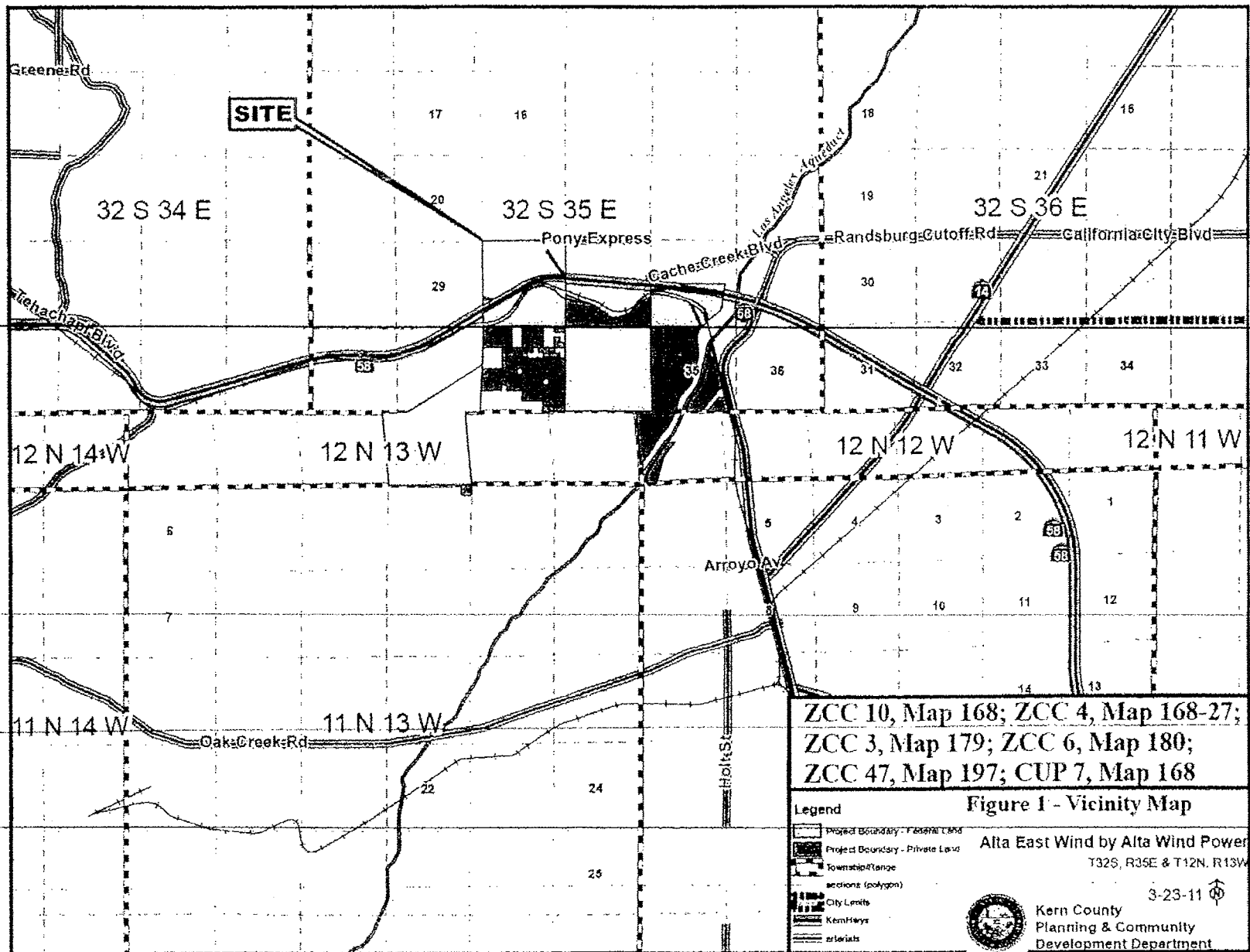
Sincerely,

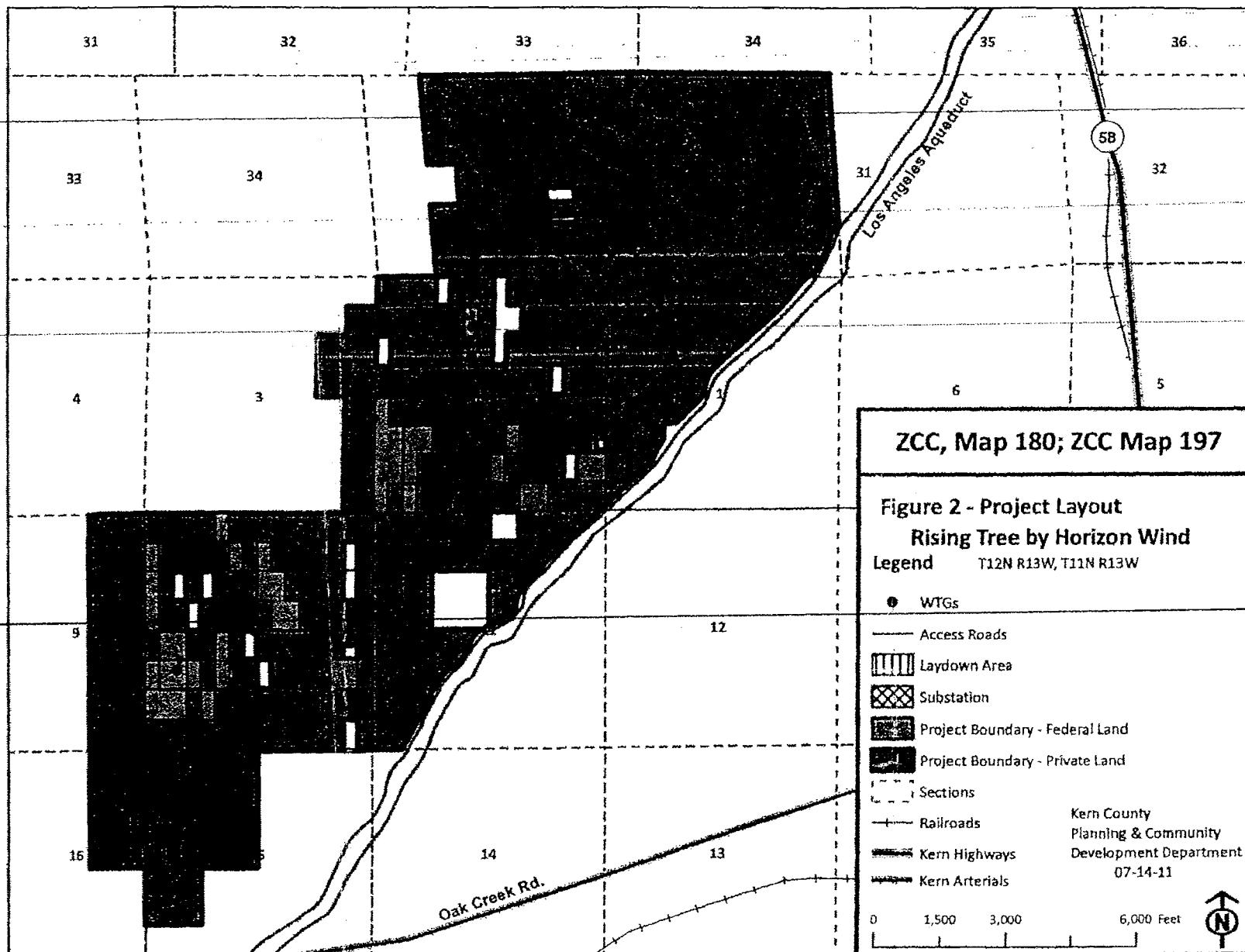


Jacquelyn Kitchen
Planner III
Advanced Planning Division

Attachment: Map showing project boundary







September 27, 2012

Ms. Jacqueline Kitchen
Supervising Planner
County of Kern Planning and Community Development Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323

Mr. Jeffery Childers
Project Manager RECO
Bureau of Land Management
22835 Calle San Juan De Los Lagos
Moreno Valley, CA 92553

Re: **Comments on Draft Plan Amendment and Draft Environmental Impact Statement/Environmental Impact Report for the Alta East Wind Project**

Dear Ms. Kitchen / Mr. Childers,

Alta Windpower Development, LLC (AWD) has reviewed the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and is submitting comments for your review and consideration.

We are also submitting clarifying information related to the turbine model AWD expects to use for the project. The attached enclosures describe the proposed model specifications. The use of this turbine model would not change the total project acreage, number of turbines or megawatts proposed for the site.

Please feel free to contact the project development lead, David Neilsen (email: dneilsen@terra-genpower.com; 206-658-7724) with any questions regarding this submittal. Thank you for your time and consideration.

Sincerely,

Alta Windpower Development, LLC



Randy Hoyle
Senior Vice President, Development

MINOR REVISIONS TO THE PROJECT DESCRIPTION AND ASSOCIATED INFORMATION

Since publication of the Draft EIS/EIR, Alta Windpower Development, LLC revised the proposed project turbine specifications to the following:

- WTG Height: 142 meters (from 125 meters as stated in the EIS/EIR)
- Hub Height: 84 meters (from 80 meters as stated in the EIS/EIR)
- Rotor Diameter: 112 meters (from 90 meters as stated in the EIS/EIR)

The revised project turbine would not change the total project acreage (2,592 acres), number of turbines (106 WTGs) or megawatts (318 MW) proposed for the site. As detailed in Table 1, Project Revisions – Environmental Consequences Analysis, provided below, no new significant environmental impacts arise from these project revisions and therefore no new additional environmental analysis is required.

The revised project falls within the scope of the original project analysis included in the Draft EIS/EIR and does not 1) include substantial changes in the proposed action; 2) consist of significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; 3) or result in an increase in any impacts beyond those disclosed in the Draft EIS/EIR. No new significant environmental impacts would result from the project change and no new mitigation measures are proposed. Therefore no revisions have been made to the analysis presented within the Draft EIS/EIR and recirculation of the Draft EIS/EIR is not required under NEPA (per 40 C.F.R. § 1502.9(c)(1) or CEQA (per CEQA Guideline § 15088.5).

Table 1
Project Revisions – Environmental Consequences Analysis

| DIS/DEIR Resource Area | DEIS/DEIR Section 4.0 Environmental Consequences Analysis |
|-------------------------------------|--|
| Air Resources | No increase in ground disturbance in beyond what is disclosed in the DEIS/DEIR or change in construction equipment would occur. In addition, the required minimum wind generator setback from an on-site residence will be maintained. Therefore the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Climate Change and Greenhouse Gases | No change or increase in project construction or operations emissions would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Cultural Resources | No increase in ground disturbance beyond what is disclosed in the DEIS/DEIR would occur and the AEWP shall maintain compliance with BLM BMPs and the Section 106 process. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Environmental Justice | No change in the project location would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Lands and Realty | Increasing the height of the turbine subsequently requires increasing the setback per the minimum wind generator setback requirements of the WE Overlay. During micrositing, the AEWP would be adjusted, if necessary, to ensure that the minimum setback requirements are met before construction plans for the AEWP are finalized. The project revisions would not result in an increase in impacts and no revised analysis is required. |

| | |
|---|---|
| Livestock Grazing | No change in grazing activities within the BLM-designated grazing allotments would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Mineral Resources | No increase in ground disturbance beyond what is disclosed in the DEIS/DEIR or change in sources of sand and gravel required for project construction would occur. Therefore, the project revisions would not result in an increase in impacts and no revised analysis is required. |
| Noise | No increase or change in noise impacts are anticipated from project revisions. A technical memo discussing noise is included with this submittal (Attachment A). |
| Paleontological Resources | No increase in ground disturbance and no change to the total wind energy development area would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Public Health and Safety | No change in type, increase in amount, or manner in which hazardous materials would be used during project construction and operation would occur. As the total WTG height would not exceed 500 feet, the AEWP remains in conformance with the Kern County Zoning Ordinance and the AEWP would maintain compliance with FAA requirements. No increase in impacts to aircraft operations would occur. In addition, no increase in the amount of solid waste or change in emergency response or access to the site would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Recreation | No increase in the number of workers required for project construction or operation would occur. In addition, no change to OHV use of the site as analyzed in Section 4.12, Recreation, would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Social and Economic Setting | No change in the distance from which construction and operation workers would commute to the AEWP site would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Geology and Soil Resources | No changes in facility micro-siting methods or increase in soil disturbing activities would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Special Designations and Agriculture | No change or increase in ground disturbance, fugitive dust, or construction equipment or construction duration would occur. With regards to visual impacts, please refer to Visual Resources discussion below. The project revisions would not result in increased impacts and no revised analysis is required. |
| Transportation and Public Access | No change in the duration of construction, required work force, work hours, or construction/operation vehicle trips would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Vegetation Resources | No increase in vegetation clearing, grading, or other surface disturbance would occur, beyond what is disclosed in the DEIS/DEIR. Therefore, the project revisions would not result in increased impacts and no revised analysis is required. |
| Visual Resources (including Shadow Flicker) | No increase or change in visual or shadow flicker impacts are anticipated from project revisions. |
| Water Resources | No increase in water demand or change in water supply source during |

| | |
|-----------------------|--|
| | <p>construction or operation would occur. In addition, no increase or change in discharge, erosion, sedimentation, and/or polluted runoff would occur. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.</p> |
| Wildland Fire Ecology | <p>No increase in wildfire hazards would occur as the AEWP would continue to comply with vegetation clearance requirements onsite and implementation of the identified BMPs during construction and operation.</p> |
| Wildlife Resources | <p>No increase in ground disturbance or change in temporary or permanent impacts beyond what is disclosed in the DEIS/DEIR would occur. In addition, a larger turbine with an assumed rotor diameter of 117 meters was used to analyze project impacts to the golden eagle in order to analyze the greatest take risk, and to yield the highest take estimate with the U.S. Fish and Wildlife Service model. The project revisions do not include use of a turbine with a larger rotor swept area. Therefore, the project revisions would not result in increased impacts and no revised analysis is required.</p> <p>The Golden Eagle Risk Analysis (June 2012), which analyses a 117-meter rotor diameter turbine, is included with this submittal (Attachment B).</p> |

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| Executive Summary | | | | |
| ES.1 | ES-2 | The information contained in this Draft EIS/EIR will be considered by the BLM in its deliberations regarding approval of the ROW grant, the Land Use Plan Amendment, the Specific Plan Amendment, and by the County to consider authorization of a change in zone classification to include the Wind Energy (WE) Combing District for certain private lands and a conditional use permit (CUP) for the use of a temporary concrete batch plant during construction of the AWEF. | The information contained in this Draft EIS/EIR will be considered by the BLM in its deliberations regarding approval of the ROW grant, the Land Use Plan Amendment, the Specific Plan Amendment , and by the County to consider authorization <u>of amendments to the Circulation Element of the Kern County General Plan</u> , of a change in zone classification to include the Wind Energy (WE) Combing <u>Combining</u> District for certain private lands and a conditional use permit (CUP) for the use of a temporary concrete batch plant during construction of the AWEF. | Revisions to text are proposed to make this description consistent with description of authorizations in Introduction. |
| Chapter 1 – Introduction | | | | |
| 1 | 1-2 | After publication of the Notice of Intent (NOI) and Notice of Preparation (NOP) on July 15, 2011 and April 5, 2012..... | After publication of the Notice of Intent (NOI) and Notice of Preparation (NOP) on July 15, 2011 and April 5, 2012... | Both the NOI and NOP were published in July 2011. |
| 1.4 | 1-5 | 1.4 Major Authorizing Laws and Regulations | <u>1.4.5 Lahontan Regional Water Quality Control Board</u> <u>The project is located in the southwestern portion of the South Lahontan Hydrologic Region. Therefore, any excavation or fill placement within waters of the State may require authorization under waste discharge requirements to be issued by the Lahontan Regional Water Quality Control Board. For construction projects having small dredge/fill impacts to non-federal waters of the State, and that are not required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (i.e., the General Construction Permit adopted by the State Board), coverage under general WDRs may be obtained from the Lahontan RWQCB</u> | Suggest inclusion of a discussion of the Lahontan Regional Water Quality Control Board's authority over the project and the potential need for waste discharge requirements within Section 1.4. |

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| | | | <u>(R6T-2003-0004). Discharges of fill into waters of the State have been authorized under these WDRs for other wind energy projects in the project vicinity.</u> | |
| 1.4.2 | 1-5 | Throughout the Draft PA and Draft EIS/EIR process, the BLM has provided information to the ACOE to assist them in making a determination regarding their jurisdiction and need for a Section 404 permit. | <p>Throughout the Draft PA and Draft EIS/EIR process, the BLM has provided information to the ACOE to assist them in making a determination regarding their jurisdiction and need for a Section 404 permit. <u>The ACOE has determined that the Project does not include any waters of the United States or other jurisdictional features per their letter dated May 24, 2012.</u></p> <p>**Note: The May 24, 2012 letter has been provided as Attachment C to this comment table.</p> | Additional text to clarify that the Corps has determined the project site lacks any jurisdictional features. The May 24, 2012 letter has been provided as Attachment A to this comment table. |
| 1.6.2 | 1-10 | 1.6.2 Relationship to State and Local Laws, Plans, Policies, and Programs. | <p><u>Porter-Cologne Water Quality Control Act</u></p> <p><u>Water Code section 13260 requires “any person discharging waste, or proposing to discharge waste, within any region that could affect waters of the State to file a report of waste discharge (an application for waste discharge requirements)” (Water Code §13260(a)(1)). The term “waters of the State” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code §13050(e)).</u></p> <p><u>Under Porter-Cologne, dischargers must notify the regional water board when a project will result in the discharge of dredged or fill material to waters of the State, and the RWQCB is required to issue or waive waste discharge requirements (WDRs) whenever it receives a report of discharge.</u></p> <p><u>The regional board, after any necessary hearing, shall prescribe requirements as to</u></p> | Suggest inclusion of the provided discussion of the Porter-Cologne Water Quality Control Act within Section 1.6.2. |

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| | | | <u>the nature of any proposed discharge, existing discharge, or material change in an existing discharge... with relation to the conditions existing in the disposal area or receiving waters upon, or into which the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose ...(Water Code § 13263(a)).</u> | |
| Chapter 2 – Project and Alternatives | | | | |
| 2.1.2.3 | 2-4 | <p>The total height of the WTG at the highest point of the rotor blade rotation would be 125 meters (410 feet). The ground clearance for the rotor blades at their lowest point of rotation would be 35 meters (115 feet). The turbines are designed to withstand wind speeds over 120 miles per hour, exceeding the recorded and projected maximum wind speeds at the AEWPs site.</p> <p>Tower. The tower portion of the WTG would consist of a tubular steel monopole that extends from the top of its concrete foundation at ground level to its connection with the nacelle. The tower would support the nacelle, hub, and three-bladed rotor and has internal access ladders for turbine maintenance. The total height of the tower to the hub of the rotor blades would be 80 meters (262 feet) tall on a 3-meter (10-foot) diameter base.</p> | <p>The total height of the WTG at the highest point of the rotor blade rotation would be <u>142 meters (465 feet)</u> 125 meters (410 feet). The ground clearance for the rotor blades at their lowest point of rotation would be <u>28 meters (98 feet)</u> 35 meters (115 feet). The turbines are designed to withstand wind speeds over 120 miles per hour, exceeding the recorded and projected maximum wind speeds at the AEWPs site.</p> <p>Tower. The tower portion of the WTG would consist of a tubular steel monopole that extends from the top of its concrete foundation at ground level to its connection with the nacelle. The tower would support the nacelle, hub, and three-bladed rotor and has internal access ladders for turbine maintenance. The total height of the tower to the hub of the rotor blades would be <u>85 meters (279 feet)</u> 80 meters (262 feet) tall on a 3-meter (10-foot) diameter base.</p> | Changes made to reflect the applicant changes to the proposed project. This is a global comment that applies to all turbine descriptions in the DEIS/DEIR. |
| 2.1.2.3 | 2-5 | Blades/Rotor. WTGs would have three blades bolted to the hub; the blades and hub are collectively called the rotor. The WTG rotors | Blades/Rotor. WTGs would have three blades bolted to the hub; the blades and hub are collectively called the rotor. The | Changes made to reflect the Applicant Changes to the Proposed Project. This is a global comment that applies to all turbine |

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| | | <p>would be 90 meters (295 feet) in diameter. The blades are long, tapered, small-chord airfoils that resemble airplane wings. They vary in thickness (thinnest at the tip and thickest where they attach to the hub) and use aerodynamic lift, similar to an airplane wing, to provide the driving force for spinning the rotor. Each rotor would be equipped with a braking system to prevent rotors from dislocating from the turbine.</p> <p>Wind Turbine Foundations and Pad Areas</p> <p>Each WTG would be supported by a steel-reinforced concrete foundation. The AEWP could include several WTG foundation types depending on geotechnical constraints, wind pattern, and other factors onsite:</p> <ul style="list-style-type: none"> • Patrick and Henderson Inc. (P&H) foundation. This patented foundation type would be drilled or dug to between 15 and 35 feet deep, depending on geotechnical conditions and loadings, and would be 18 feet in diameter. The foundation would be in the configuration of an annulus — two concentric steel cylinders. The central core of the smaller, inner cylinder would be filled with soil removed during excavation. In the cavity between the rings, bolts would be used to anchor the tower to the foundation, and the cavity would be filled with concrete. Bolting the tower to the foundation would provide post-tensioning to the concrete. • Rock anchor. For each foundation, six to 20 holes, depending on geotechnical data, would be drilled 35 feet into the bedrock, and steel anchors would be epoxy-grouted in place. A reinforced concrete cap containing the anchor bolts would be poured on the top of the steel anchors to | <p>WTG rotors would be <u>up to 112 meters (367 feet) 90-meters (295 feet)</u> in diameter. The blades are long, tapered, small-chord airfoils that resemble airplane wings. They vary in thickness (thinnest at the tip and thickest where they attach to the hub) and use aerodynamic lift, similar to an airplane wing, to provide the driving force for spinning the rotor. Each rotor would be equipped with a braking system to prevent rotors from dislocating from the turbine.</p> <p>Wind Turbine Foundations and Pad Areas</p> <p>Each WTG would be supported by a steel-reinforced concrete foundation. The AEWP could include several WTG foundation types depending on geotechnical constraints, wind pattern, and other factors onsite:</p> <ul style="list-style-type: none"> • Patrick and Henderson Inc. (P&H) foundation. This patented foundation type would be drilled or dug to between 15 and 35 feet deep, depending on geotechnical conditions and loadings, and would be 18 feet in diameter. The foundation would be in the configuration of an annulus — two concentric steel cylinders. The central core of the smaller, inner cylinder would be filled with soil removed during excavation. In the cavity between the rings, bolts would be used to anchor the tower to the foundation, and the cavity would be filled with concrete. Bolting the tower to the foundation would provide post-tensioning to the concrete. • Rock anchor. For each foundation, six to 20 holes, depending on geotechnical data, would be drilled 35 feet into the bedrock, and steel anchors would be epoxy-grouted in place. A reinforced concrete cap | <p>descriptions in the DEIS/DEIR.</p> |

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| | | <p>support the tower structure.</p> <ul style="list-style-type: none"> • Spread-footing. This foundation would be square or octagonal and formed with reinforcing steel and concrete. Depending on geotechnical data, this type of foundation may be as large as 35-by-35 feet and 6 to 10 feet thick. | <p>containing the anchor bolts would be poured on the top of the steel anchors to support the tower structure.</p> <ul style="list-style-type: none"> • Spread-footing. This foundation would be square or octagonal and formed with reinforcing steel and concrete. Depending on geotechnical data, this type of foundation may be as large as 60-by-60 35-by-35 feet and 6 to 10 feet thick. | |
| 2.3 | 2-18 | Existing General Plan Designations and General Plan/Specific Plan Amendment Request | Existing General Plan Designations and General Plan/ Specific Plan Amendment Request | No SPA is required. |
| 2.5.1 | 2-23 | Under this alternative, the BLM and County would not approve the AEWP. BLM approval is limited to activities occurring within BLM administered lands, while County approval would apply to private lands. As such, the BLM would not amend the CDCA Plan County, while the County would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP. | Under this alternative, the BLM and County would not approve the AEWP. BLM approval is limited to activities occurring within BLM administered lands, while County approval would apply to private lands. As such, the BLM would not amend the CDCA Plan or grant the ROW County, while the County would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP. | No SPA is required. |
| 2.6.1 | 2-24 | While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County. | While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County. | No SPA is required. |
| 2.6.2 | 2-24 | While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County. | While the County would not approve the AEWP under this alternative, and would not amend the KCGP, make any zoning changes, amend the Mojave Specific Plan, or issue a CUP, AEWP or future wind development within the private land portion of the AEWP site could be approved by the County. | No SPA is required. |

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| 2.8 | 2-25 | In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. | In accordance with NEPA (40 CFR §1502.14(e)), the BLM has identified its preferred alternative as Alternative C, Reduced Project North. <u>The BLM's ultimate decision as to the alternative selected will be set forth in its record of decision pursuant to 40 CFR § 1505.2.</u> | Additional text clarifies that BLM's decision will be reflected in the Record of Decision (ROD). |
| Chapter 3 - Affected Environment | | | | |
| 3.21.3.2 | 3.21-37 | 3.21.3.2 State Law and Regulations | <p><u>Porter-Cologne Water Quality Control Act</u></p> <p><u>Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect waters of the State to file a report of waste discharge (an application for waste discharge requirements)" (Water Code §13260(a)(1)). The term "waters of the State" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code §13050(e)).</u></p> <p><u>Under Porter-Cologne, dischargers must notify the regional water board when a project will result in the discharge of dredged or fill material to waters of the State, and the RWQCB is required to issue or waive waste discharge requirements (WDRs) whenever it receives a report of discharge (Water Code § 13263(a).</u></p> <p><u>Any excavation or fill placement within these features would require authorization under WDRs to be issued by the Lahonton RWQCB. For construction projects having small dredge/fill impacts to non-federal waters of the State, and that are not required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (i.e., the General Construction Permit</u></p> | Suggest inclusion of the provided discussion of the Porter-Cologne Water Quality Control Act within Section 3.21.3.2. |

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| | | | <u>adopted by the State Board), coverage under general WDRs may be obtained from the Lahontan RWQCB (R6T-2003-0004). Discharges of fill into waters of the State have been authorized under these WDRs for other wind energy projects in the project vicinity.</u> | |
| 3.21.1.1 | 3.21-5 | Due to its location, the AEWP area likely provides connectivity for a number of terrestrial and avian species, both resident and migratory. | Due to its location, the AEWP area likely provides connectivity for a number of terrestrial and avian species, both resident and migratory; <u>however, the connective functionality is compromised by roadways and intervening development as described above.</u> | Suggest revision to clarify condition of connectivity. |
| Table 3.21-1 | 3.21-10 | (Swainson’s Hawk) Present. This species was observed within the AEWP area during avian use studies. The entire project area supports suitable foraging habitat. Potential nesting habitat occurs over much of the site, including Joshua tree woodlands. | (Swainson’s Hawk) Present. This species was observed within the AEWP area during avian use studies. The entire project area supports suitable foraging habitat. <u>Foraging habitat, if present, is limited within the project area; however, one migrant was documented during avian use studies on April 2, 2011. Nesting surveys were completed for this species in 2011 and no nests were documented within 5 miles of the AEWP.</u> Potential nesting habitat occurs over much of the site, including Joshua tree woodlands. | See suggested revisions. The preceding “Habitat” column says that SWHA “Forages in adjacent grasslands and agricultural fields and pastures”, none of which is present onsite. Therefore if foraging habitat is considered grassland and agricultural land, this conclusion is incorrect. However, P.3.21-4 defines SWHA foraging habitat as: “relatively open stands of grass-dominated vegetation and relatively sparse shrublands”. One definition of foraging habitat should be used for consistency and accuracy. Also, this species was only observed 1x, as a migrant, on April 1, 2011 (in 2 yrs of study). |
| Table 3.21-1 | 3.21-18 | (Mohave Ground Squirrel) High. The nearest record for this species is from 1987 and is located less than 1 mile east of the AEWP site, 1.5 miles east of the junction of SR 58 and the Randsburg Cutoff near Cache Creek. A record from 1998 occurs 3 miles east of the project site, and 2 records | (Mohave Ground Squirrel) High <u>Low.</u> The nearest record for this species is from 1987 and is located less than 1 mile east of the AEWP site, 1.5 miles east of the junction of SR 58 and the Randsburg Cutoff near Cache Creek. A record from 1998 occurs 3 miles east of the project site, and 2 | Applicant recommends characterizing Mojave ground squirrel as “low” because negative surveys have indicated “absence” and the two most recent sightings are 14 and 25 years ago. |

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| | | from 2006 are located less than 2 miles south and 4.5 miles southwest of the AEWP site (0.5mile east and 0.2 mile east of the transmission line centerline, respectively). The AEWP site and transmission line route supports suitable habitat for this species. Trapping studies have been conducted for this species in 2006 (AEWP site), 2010 (adjacent project, near portions of transmission line), and 2011 (AEWP site), but were negative. Recent trapping studies conducted in nearby and adjacent project areas such as the Alta–Oak Creek Mojave Project and Infills have also been negative for this species. | records from 2006 are located less than 2 miles south and 4.5 miles southwest of the AEWP site (0.5mile east and 0.2 mile east of the transmission line centerline, respectively). The AEWP site and transmission line route supports suitable habitat for this species. Trapping studies have been conducted for this species in 2006 (AEWP site), 2010 (adjacent project, near portions of transmission line), and 2011 (AEWP site), but were negative. Recent trapping studies conducted in nearby and adjacent project areas such as the Alta–Oak Creek Mojave Project and Infills have also been negative for this species. <u>Further, the AEWP is located outside the bounds of the species’ currently accepted core areas and movement corridors (Leitner, 2008).</u> | |
| 3.21.2 | 3.21-21/22 | No condors were observed during any surveys conducted on and near the site, including aerial raptor nest surveys and two (2) years of fixed-point avian use surveys. USFWS data since 2005 indicate that the nearest documented condor was located in the Tehachapi Mountains, 4.3 miles northeast of the AEWP and a historic location was recorded 2.3 miles west of the AEWP. | <u>Surveys and Results:</u> No condors were observed during any surveys conducted on and near the site, including aerial raptor nest surveys and two (2) years of fixed-point avian use surveys. USFWS data since 2005 indicate that the nearest documented condor was located in the Tehachapi Mountains, 4.3 miles northeast of the AEWP and a historic location was recorded 2.3 miles west of the AEWP. | No “Surveys and Results” section is included in this write-up on condor, as is presented for the other species. Recommend inserting “Surveys and Results” heading prior to last paragraph of this section. |
| 3.21.2 | 3.21-22 | In 2009/2010, 11 golden eagle observations were recorded at the AEWP (one each in spring and summer, three in fall, and six in winter). | <u>In 2009/2010, 11 golden eagle observations were recorded at the AEWP (one each in spring and summer, three in fall, and six in winter). A total of 7 golden eagle groups with 11 individual sightings were recorded during the first year of surveys in 2009/2010. However, all observations occurred off the project area at survey points 4, 5, and 6. Observations were recorded during all seasons (spring, n=1</u> | Please see suggested revision and clarification. The Draft EIR’s representation of the avian data is inaccurate. The eagles recorded in year 1 were off site, not within the AEWP. |

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| | | | <u>eagle; summer, n= 1; fall, n= 3; winter, n= 6) and suggested potentially higher use of these areas in winter (CH2M HILL, 2012. Draft No. 2 Conservation Plan for the Avoidance and Minimization of Potential Impacts to Golden Eagles Alta East Wind Project. March 2012. [see also Appendix D-30 in the EIR/EIS]).</u> | |
| Chapter 4 – Affected Environment | | | | |
| 4.2.11 | 4.2-23 | <p>MM 4.2-1 Construction Fugitive Dust Emissions Reduction. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop a Fugitive Dust Control Plan that will be implemented during project construction. The Plan shall be prepared in compliance with Eastern Kern Air Pollution Control District (EKAPCD) Rule 402 to reduce PM10 and PM2.5 emissions during construction. At minimum, the Fugitive Dust Control Plan shall include the following:</p> <ol style="list-style-type: none"> 1. Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the plan; 2. Description and location of the construction operation(s); 3. Listing of all fugitive dust emissions sources included in the construction operations; 4. In addition to compliance with all applicable EKAPCD and California Air Resources Board (CARB) requirements, the following dust control measures shall be implemented: | | |

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| | | <p>a. All onsite unpaved roads shall be effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.</p> <p>b. All material excavated or graded will be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. During the duration of construction, all excavated soil piles shall be watered periodically or covered with temporary coverings.</p> <p>c. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions when activities cause visible dust plumes. Construction activities may continue if dust suppression measures are used that follow the Eastern Kern Air Pollution Control District's Reasonably Available Control Measures (Rule 402, Table I); or more stringent measures. At minimum, the measures shall ensure that: (1) the visible dust plumes are not transported off the Project site or within 400-feet of any regularly occupied structure not owned by the Project Proponent; and, (2) that the visible dust plumes generated from linear construction are not transported more than 200-feet beyond the centerline of the linear facilities and do not cause a traffic obscuration hazard on public roads.</p> | <p>a. All onsite unpaved roads shall be effectively stabilized using <u>water or</u> soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.</p> <p>c. Construction activities that occur on unpaved surfaces will be discontinued during windy conditions <u>(winds exceeding 25 mph) when activities cause visible dust plumes.</u> Construction activities may continue if dust suppression measures are used that follow the Eastern Kern Air Pollution Control District's Reasonably Available Control Measures (Rule 402, Table I); or more stringent measures. At minimum, the measures shall ensure that: (1) the visible dust plumes are not transported off the Project site or within 400-feet of any regularly occupied structure not owned by the Project Proponent; and, (2) that the visible dust plumes generated from linear construction are not transported more than 200-feet beyond the centerline of the linear facilities and do not cause a traffic obscuration hazard on public roads.</p> | <p>Applicant requests option to use water as a soil stabilizer for fugitive dust control, because of its availability as well as success on previous adjacent projects.</p> <p>Applicant suggests text revision to define windy conditions by wind speed, and to make measure consistent with other Kern County environmental documents.</p> |

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| | | | | |
| 4.2.11 | 4.2-25 | <p>MM 4.2-2 Construction Equipment Emissions Reduction. The project proponent shall continuously comply with the following during construction:</p> <p>2. To control Nitrogen Oxides (NOx) emissions from on-road heavy-duty diesel haul vehicles that are contracted for use to haul equipment and materials for the project:</p> <p>a. 2007 engines or pre-2007 engines with California Air Resources Board certified Level 3 diesel emission controls will be used to the extent possible.</p> | <p>2. To control Nitrogen Oxides (NOx) emissions from on-road heavy-duty diesel haul vehicles that are contracted for use <u>on a continual basis</u> to haul equipment and materials for the project:</p> | <p>Some special purpose haul vehicles may not comply with these requirements. Suggest text revision noting that this measure would apply to only those haul vehicles which are used on a continual basis.</p> |

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| | | <p>b. All on-road construction vehicles, except those vehicles with California Air Resources Board certified Level 3 diesel emissions controls, shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to worker personal vehicles.</p> <p>c. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized.</p> <p>d. The construction contractor shall ensure that all on-road construction vehicles are properly tuned and maintained in accordance with the manufacturers' specifications.</p> | <p>b. All on-road construction vehicles, except those vehicles with California Air Resources Board certified Level 3 diesel emissions controls, shall meet all applicable California on-road emission standards and shall be licensed in the State of California. This does not apply to worker personal vehicles.</p> | <p>b. Requiring licensing in CA is impracticable given the regional, even national nature of the vehicle fleet used in wind energy construction.</p> |
| 4.2.11 | 4.2-25 | <p>MM 4.2-3 Operation Fugitive Dust and Equipment Emissions Reduction. The project proponent shall continuously comply with the following during project operation:</p> <p>1. To control fugitive dust emissions from the use of unpaved roads on the site:</p> <p>a. The main access road for employees and deliveries to the O&M complex and to the onsite substation shall be paved or effectively stabilized using soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.</p> <p>b. The other unpaved roads at the site shall be stabilized using soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes.</p> <p>c. Traffic speeds on unpaved roads shall be limited to no more than 15 miles per hour.</p> | <p>MM 4.2-3 Operation Fugitive Dust and Equipment Emissions Reduction. The project proponent shall continuously comply with the following during project operation:</p> <p>1. To control fugitive dust emissions from the use of unpaved roads on the site:</p> <p>a. The main access road for employees and deliveries to the O&M complex and to the onsite substation shall be paved or effectively stabilized using <u>water or</u> soil stabilizers that can be determined to be as efficient as or more efficient for fugitive dust control than California Air Resources Board registered soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation.</p> <p>b. The other unpaved roads at the site shall be stabilized using soil stabilizers so that vehicle travel on these roads does not cause visible dust plumes.</p> <p>c. Traffic speeds on unpaved roads shall be limited to no more than 15 miles per hour.</p> | <p>Applicant requests option to use water as a soil stabilizer for fugitive dust control, because of its availability as well as success on previous adjacent projects.</p> <p>Using soil stabilizers or water on unpaved roads is unnecessary due to applicant-enforced driving speeds, and potentially wasteful given the limited use of these roads.</p> |

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| | | <p>Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the O&M facility and onsite substation.</p> <p>2. To control particulate emissions from onsite dedicated equipment exhaust:</p> <p>a. All on-site off-road equipment and on-road vehicles for operation/maintenance shall be new equipment that meets the recent California Air Resources Board engine emission standards or alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate.</p> <p>b. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized.</p> <p>c. All equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specification.</p> | <p>Traffic speed signs shall be displayed prominently at all site entrances and at egress point(s) from the O&M facility and onsite substation.</p> <p>2. To control particulate emissions from onsite dedicated equipment exhaust:</p> <p>a. All on-site off-road equipment and on-road vehicles for operation/maintenance shall be new equipment that meets the recent California Air Resources Board engine emission standards or alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, as appropriate.</p> <p>b. All equipment shall be turned off when not in use. Engine idling of all equipment shall be minimized.</p> <p>c. All equipment engines shall be maintained in good operating condition and in proposed tune per manufacturers' specification.</p> | <p>Applicant recommends text deletion. Off-road equipment required for this project is highly specialized and compliance with CARB emissions guidelines is unknown, and would be subject to availability.</p> |
| 4.4.12 | 4.4-23 | <p>MM 4.4-4 Prior to the issuance of grading or building permits by the County or a Notice to Proceed by the BLM, the project proponent shall submit verification to the BLM and Kern County Planning and Community Development Department which demonstrates that exclusion fencing has been installed around the archaeological sites that are located within 60-feet of project facilities and planned ground-disturbing activities</p> | <p>MM 4.4-4 Prior to the issuance of grading or building permits by the County or a Notice to Proceed by the BLM, the project proponent shall submit <u>fencing plans</u> verification to the BLM and Kern County Planning and Community Development Department which demonstrates that exclusion fencing will be has been installed around the archaeological sites that are located within 60-feet of project facilities and planned ground-disturbing activities. <u>Upon completion of fence installation, the project proponent shall submit verification that the exclusion fencing has been installed by letter from the project operator.</u></p> | <p>It is the Applicant's understanding that fencing cannot be installed prior to issuance of grading or building permits. The suggested revisions provide for a fencing plan to be submitted.</p> |

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| 4.6.3 | 4.6-4 | The AEWP would not directly impact any individual Bakersfield cactus meeting the federal definition of the listed taxon. Eight (8) such plants were identified in the AEWP area during 2010 and 2011 rare plant surveys, and all would be avoided by the AEWP. However, a total of 112 individuals of Bakersfield cactus were mapped within the AEWP site in 2010. All of the <i>O. basilaris</i> plants classified under the 2011 CDFG guidelines as Bakersfield cactus occur in the hills in the northern portion of the AEWP area. It is likely that some of these individuals cannot be calculated at this time pending final engineering. | The AEWP would not directly impact any individual Bakersfield cactus meeting the federal definition of the listed taxon. Eight (8) such plants were identified in the AEWP area during 2010 and 2011 rare plant surveys, and all would be avoided by the AEWP. However, a total of 112 individuals of Bakersfield cactus <u>meeting the 2011 CDFG guidelines</u> were mapped within the AEWP site in 2010. All of the <i>O. basilaris</i> plants classified under the 2011 CDFG guidelines as Bakersfield cactus occur in the hills in the northern portion of the AEWP area. It is likely that some of these individuals cannot be calculated at this time pending final engineering. | Modified to clarify 112 individuals were mapped using the 2011 CDFG guidelines. |
| 4.6.11 | 4.6-18 | MM 4.6-1 Notice to Proceed. Prior to the issuance of grading or building permits and/or a Notice to Proceed from the BLM, the project proponent shall submit a final project design to the authorized officer of Edwards Air Force Base and China Lake Naval Air Weapons Station. Said final project design, shall be in the form of a detailed plot plan as required by Section 19.64.140 (Detailed Plot Plan Required – Contents) of the Kern County Zoning Ordinance and shall include final specifications on the height and location of the wind turbine generators to be installed as well as the anticipated schedule of each construction phase. | MM 4.6-1 Notice to Proceed. Prior to the issuance of grading or building permits and/or a Notice to Proceed from the BLM, the project proponent shall submit a final project design to the authorized officer of Edwards Air Force Base and China Lake Naval Air Weapons Station. Said final project design, shall be in the form of a detailed plot plan as required by Section 19.64.140 <u>19.64.130</u> (Detailed Plot Plan Required – Contents) of the Kern County Zoning Ordinance and shall include final specifications on the height and location of the wind turbine generators to be installed as well as the anticipated schedule of each construction phase. | Incorrect citation; revised accordingly. |
| 4.6.11 | 4.6-18 | MM 4.6-2 Notification to Property Owners. At least 30 days prior to the commencement of grading or building and/or a Notice to Proceed, the project proponent shall mail a copy of the construction schedule to property owners within 1,000 feet of the project site. | MM 4.6-2 Notification to Property Owners. At least 30-7 days prior to the commencement of grading or building and/or a Notice to Proceed, the project proponent shall mail a copy of the construction schedule to property owners | See suggested text revision. Thirty-days advance notice is prohibitive in meeting construction schedule. Suggested revision reflects typical notification of seven days. |

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| | | The purpose of this notification shall be so that property owners are informed as to the time and location of disturbance. Updates shall be provided as necessary. | within 1,000 feet of the project site. The purpose of this notification shall be so that property owners are informed as to the time and location of disturbance. Updates shall be provided as necessary. | |
| 4.9.11 | 4.9-22 | <p>MM 4.9-2 Final Noise Report Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit the following to the BLM and Kern County Planning and Community Development Department for review and approval:</p> <ol style="list-style-type: none"> 1. The project proponent shall submit a final <i>Noise Report</i> for residences located within one (1) mile in a prevailing wind direction, or within one-half (1/2) mile in any other direction of the project boundaries. The Noise Report shall demonstrate compliance with County Code Chapter 19.64 (Section 19.64.140.J) Wind Energy (WE) Combining District performance standards, and the Kern County General Plan Noise Element policies regarding outdoor and interior noise levels of sensitive receptors. 2. The Noise Report shall include evidence which demonstrates that one of the following methods will be implemented to reduce low frequency noise impacts to a less than significant level: <ol style="list-style-type: none"> a. Demonstration that limits on the cut-on speed of the wind turbine generators, and how those limits will reduce noise impacts to levels within Kern County performance thresholds; b. Showing that using a mix of turbine models and megawatts will reduce noise levels to a less than significant level (to be confirmed during the final review of the | <p>MM 4.9-2 Final Noise Report Plan. <u>In the event the Project Proponent proposes to locate any turbine(s) closer to the Project boundary than the location(s) analyzed in the Alta East Noise Study completed by WZL, Inc (May 2011), or if waivers from the affected property owners are not obtained,</u> prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit the following to the BLM and Kern County Planning and Community Development Department for review and approval:</p> <ol style="list-style-type: none"> 1. The project proponent shall submit a final <i>Noise Report</i> for residences located within one (1) mile in a prevailing wind direction, or within one-half (1/2) mile in any other direction of the project boundaries. The Noise Report shall demonstrate compliance with County Code Chapter 19.64 (Section 19.64.140.J) Wind Energy (WE) Combining District performance standards, and the Kern County General Plan Noise Element policies regarding outdoor and interior noise levels of sensitive receptors. 2. The Noise Report shall include evidence which demonstrates that one of the following methods will be implemented to reduce low frequency noise impacts to a less than significant level: <ol style="list-style-type: none"> a. Demonstration that limits on the cut-on speed of the wind turbine generators, and | See suggested revisions. Added clarification that the final noise plan would be required only if the final turbine layout deviates from original analysis, and allows Applicant to secure noise waivers, as needed. |

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| | | <p>plot plan).</p> <p>c. Set back turbines to the maximum extent feasible from any designated habitable structure.</p> <p>3. The Noise Report shall show final routing of all transmission lines and ensure that any corona discharge noise from these lines shall not increase ambient noise conditions at any sensitive receptors by 5 dBA or more.</p> | <p>how those limits will reduce noise impacts to levels within Kern County performance thresholds;</p> <p>b. Showing that using a mix of turbine models and megawatts will reduce noise levels to a less than significant level (to be confirmed during the final review of the plot plan).</p> <p>c. Set back turbines to the maximum extent feasible from any designated habitable structure.</p> <p>3. The Noise Report shall show final routing of all transmission lines and ensure that any corona discharge noise from these lines shall not increase ambient noise conditions at any sensitive receptors by 5 dBA or more.</p> | |
| 4.9.11 | 4.9-22 | <p>MM 4.9-3 Construction and Operation Noise Reduction Methods. The project proponent shall continuously comply with the following during construction, operation, and decommissioning of the project:</p> <p>All construction equipment shall be equipped with mufflers and other suitable noise attenuation devices, that equipment engines are enclosed, and that all construction equipment is in good working order.</p> <p>The project proponent shall comply with all elements of the Kern County Ordinance, Chapter 8.36 (Section 8.36.020, Prohibited Sounds), such that no construction will occur at construction sites within 1,000 feet of an occupied residential dwelling between 9:00 p.m. and 6:00 a.m. weekdays and 9:00 p.m. and 8:00 a.m. on weekends.</p> <p>A noise disturbance coordinator shall be established. The disturbance coordinator shall be responsible for responding to any</p> | <p>The project proponent shall comply with all elements of the Kern County Ordinance, Chapter 8.36 (Section 8.36.020, Prohibited Sounds), such that no construction will occur at construction sites within 1,000 feet of an occupied residential dwelling between 9:00 p.m. and 6:00 a.m. weekdays and 9:00 p.m. and 8:00 a.m. on weekends <u>unless an exception is granted by the County.</u></p> | See suggested text revision. |

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| | | local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable measures to resolve the complaint. Signs posted at the construction site shall list the telephone number for the disturbance coordinator. | | |
| 4.10.11 | 4.10-12 | <p>MM 4.10-1 Develop Paleontological Resource Monitoring and Mitigation Plan. Prior to the issuance of grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit a <i>Paleontological Resource Management Plan</i> that details how paleontological resources located within the project site will be avoided and/or treated. The <i>Paleontological Resource Management Plan</i> shall be prepared, at the sole expense of the project proponent, and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The plan shall be submitted for review and approval by the BLM and the Kern County Planning and Community Development Department.</p> <p>The <i>Paleontological Resource Management Plan</i> shall include the following information:</p> <ol style="list-style-type: none"> 1. Identification and mapping of impact areas of moderate to high sensitivity that will be monitored during construction; 2. A coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbances in sediments determined to | <p>MM 4.10-1 Develop Paleontological Resource Monitoring and Mitigation Plan. Prior to the issuance of grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit a <i>Paleontological Resource Management Plan</i> that details <u>when and where paleontological monitoring will occur</u> and how paleontological resources located within the project site will be avoided and/or treated. The <i>Paleontological Resource Management Plan</i> shall be prepared, at the sole expense of the project proponent, and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements. The plan shall be submitted for review and approval by the BLM and the Kern County Planning and Community Development Department.</p> <p>The <i>Paleontological Resource Management Plan</i> shall include the following information:</p> <ol style="list-style-type: none"> 1. Identification and mapping of impact areas of moderate to high sensitivity that will be monitored during construction; 2. A coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbances in sediments determined to | <p>See suggested text revisions.</p> <p>Full and part time monitoring in "moderate" sensitivity units is not necessary nor typical.</p> |

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| | | <p>have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist);</p> <p>3. The significance criteria to be used to determine which resources will be avoided or recovered for their data potential;</p> <p>4. Procedures for the discovery, recovery, preparation, and analysis of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP;</p> <p>5. Provisions for verification that the project proponent has an agreement with a recognized museum repository (e.g., the Buena Vista Museum of Natural History or the Raymond Alf Museum), for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged);</p> <p>6. Specifications that all paleontological work undertaken by the Project Proponent on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation); and,</p> <p>7. Description of monitoring reports that will be prepared, which shall include daily logs and a final monitoring report with an itemized list of specimens found to be</p> | <p>have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist);</p> <p>3. The significance criteria to be used to determine which resources will be avoided or recovered for their data potential;</p> <p>4. Procedures for the discovery, recovery, and salvage preparation, and analysis of paleontological resources encountered during construction, in accordance with standards for recovery established by the SVP;</p> <p>5. Provisions for verification that the project proponent has an agreement with a recognized museum repository (e.g., the Buena Vista Museum of Natural History or the Raymond Alf Museum), for the disposition of recovered fossils and that the fossils shall be prepared prior to submittal to the repository as required by the repository (e.g., prepared, analyzed at a laboratory, curated, or cataloged);</p> <p>6. Specifications that all paleontological work undertaken by the Project Proponent on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM) and a Paleontological Collecting Permit (for work on lands administered by California Department of Parks and Recreation); and,</p> <p>7. Description of monitoring reports that will be prepared, which shall include daily logs and a final monitoring report with an</p> | <p>Suggest that repositories not be listed specifically The important point is that the agreement obtained by the project proponent be with an accredited museum.</p> <p>See revised text.</p> |

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| | | submitted to Kern County Planning and Community Development Department, the project proponent, the Buena Vista Museum of Natural History, and the Natural History Museum of Los Angeles County within 90 days of the completion of monitoring. | itemized list of specimens found to be submitted to Kern County Planning and Community Development Department, the project proponent, proponent, <u>and an accredited museum into which any recovered fossil specimens are accessioned into the Buena Vista Museum of Natural History, and the Natural History Museum of Los Angeles County</u> within 90 days of the completion of monitoring. | |
| 4.6.10.4 | 4.6-16 | Construction of the AEWP is anticipated to commence in 2012 and require 9 to 12 months to complete. Of the projects listed in Table 4.1-1, construction of the following projects may occur at the same times as the AEWP: | | Please confirm whether projects listed in Table 4.-1- are still under construction. This is a global comment. |
| 4.10.11 | 4.10-12 | <p>MM 4.10-2 Train Construction Personnel.</p> <p>Prior to grading or building permits by Kern County or a Notice to Proceed by the BLM, the project proponent shall submit evidence of compliance with the following:</p> <p>1. The project proponent shall provide for a paleontologist to provide all construction personnel training on implementation of the <i>Paleontological Resource Management Plan</i> and specifically procedures to be followed in the event that a fossil site or fossil occurrence is encountered during construction. An information package shall be provided for construction personnel not present at the initial preconstruction briefing. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils will not be allowed. Violators will be subject to prosecution under the appropriate State and federal laws and violations will be grounds for removal from the project. Unauthorized resource collection or</p> | | |

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| | | <p>disturbance may constitute grounds for the issuance of a stop work order.</p> <p>2. The project proponent shall retain a paleontologist to conduct a site survey to determine if there are any Quaternary deposits present within the project boundary that would be impacted by ground-disturbing activities. If present, those deposits shall be examined for their fossil potential in order to focus monitoring efforts.</p> | <p>2. The project proponent shall retain a paleontologist to conduct a site survey to determine if there are any Quaternary deposits present within the project boundary that would be impacted by ground-disturbing activities. If present, those deposits shall be examined for their fossil potential in order to focus monitoring efforts.</p> | <p>Recommend deletion of (2) because 1) Quaternary deposits have already been identified as underlying the project. As an example, page 3, section 4.10.3.1, paragraph 2: "...there are portions of Alternative A that is underlain by undetermined-sensitivity (PFYC Class 3b) Older Pleistocene Alluvium (1,262 acres)"; 2) the Paleo management plan already calls for part-time monitoring in units with low and undetermined sensitivity...such as Quaternary units; 3) the geology at the project site has been mapped and Quaternary units identified; and 4) part time monitoring in Quaternary units with low and/or undetermined sensitivity will reveal the paleontological potential.</p> |
| 4.10.11 | 4.10-13 | <p>MM 4.10-3 Monitor Construction for Paleontology. The project proponent shall continuously comply with the following during all ground-disturbing activities and during project operations:</p> <p>1. <u>Based on the paleontological sensitivity assessment</u> and <i>Paleontological Resource Management Plan</i>, the project proponent shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate to high paleontological sensitivity. Sediments of low, marginal, or undetermined sensitivity shall be monitored by a paleontological monitor on a part-time basis (as determined by the Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Paleontologist. Monitoring shall be conducted as follows:</p> | <p>MM 4.10-3 Monitor Construction for Paleontology. The project proponent shall continuously comply with the following during all ground-disturbing activities and during project operations:</p> <p>1. <u>Based on the paleontological sensitivity assessment</u> and <i>Paleontological Resource Management Plan</i>, the project proponent shall conduct full-time construction monitoring by the qualified paleontological monitor in areas determined to have moderate to high paleontological sensitivity. Sediments of low, marginal, or undetermined sensitivity shall be monitored by a paleontological monitor on a part-time basis (as determined by the Paleontologist). Construction activities shall be diverted when data recovery of significant fossils is warranted, as determined by the Paleontologist. Monitoring shall be conducted as follows:</p> | <p>Full-time monitoring in "moderate" sensitivity units is not necessary. The modification is to make this consistent with BLM standards.</p> |

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| | | <p>a. Monitoring of ground disturbance shall consist of the surface collection of visible vertebrate and invertebrate fossils within the project site. Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted and the Project Proponent's paleontologist notified. Once the find has been inspected and a preliminary assessment made, the project proponent's paleontologist will notify the BLM and Kern County Planning and Community Development Department of the discovery. If recovery of a large or unusually productive fossil occurrence is warranted, earthmoving activities shall be diverted temporarily around the fossil site, and a recovery crew shall be mobilized to remove the material as quickly as possible. The monitor shall be permitted to photograph and/or draw stratigraphic profiles of cut surfaces and take samples for analysis of microfossils, dating, or other specified purposes, in accordance with the research design.</p> <p>b. Recovered specimens shall be prepared to a point of identification, including washing of sediments to recover smaller fossil remains. Once excavation has reached specified depths, salvage of fossil material from the side walls of the cut shall resume. Specimens shall be identified and curated into a museum repository with a retrievable storage.</p> <p>c. All significant fossil specimens recovered from the project site as a result of the paleontological mitigation program shall be treated (prepared, identified, curated, and cataloged) in accordance with designated museum repository requirements. Samples</p> | | |

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| | | <p>shall be submitted to a laboratory, acceptable to the selected museum, for identification, dating, and microfossil and pollen analysis.</p> <p>d. Daily logs shall be kept by the paleontological monitor during field monitoring and shall be submitted weekly to Kern County. A complete set of the daily monitoring logs shall be kept on-site throughout the earthmoving activities and be available for inspection. The daily monitoring log shall be keyed to a location map to indicate the area monitored, the date, the assigned personnel, and the results of the monitoring activities, including rock unit encountered, fossil specimens recovered, and associated specimen data, as well as corresponding geologic and geographic site data. Within 90 days of the completion of the paleontological monitoring, a monitoring report, with an appended, itemized inventory of specimens, shall be submitted to Kern County, the project proponent, and the Buena Vista Museum of Natural History.</p> | | |
| 4.11.11 | 4.11-31 | <p>MM 4.11-1 Sales and Use Tax. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall work with County staff to determine how the receipt of sales and use taxes related to the construction of the project will be maximized. This process shall include, but is not necessarily limited to: the Project Operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, registering this address with the State Board of Equalization, using this address for acquisition, purchasing and billing purposes associated with the project. The project</p> | <p>MM 4.11-1 Sales and Use Tax. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall work with County staff to determine how the receipt of sales and use taxes related to the construction of the project will be maximized <u>except for as otherwise approved by Kern County</u>. This process shall include, but is not necessarily limited to: the Project Operator obtaining a street address within the unincorporated portion of Kern County for acquisition, purchasing and billing purposes, registering this address with the State Board of Equalization, using this address for acquisition, purchasing and</p> | See suggested revision. |

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| | | proponent shall allow the County to use this sales tax information publicly for reporting purposes. | billing purposes associated with the project. The project proponent shall allow the County to use this sales tax information publicly for reporting purposes. | |
| 4.11.11 | 4.11-32 | MM 4.11-6 Spill Prevention, Control, and Countermeasures Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a Spill Prevention, Control, and Countermeasures Plan to the U.S. Environmental Protection Agency, the California Environmental Protection Agency, the BLM, the Kern County Planning and Community Development Department, and to the Kern County Environmental Health Services Department for review. The Plan will be for the storage and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater. The purpose of the plan will be to mitigate the potential effects of a spill of transformer oil, gasoline, or diesel fuel. The Plan shall include design features of the project that will contain accidental releases of petroleum and transformer oil products from onsite fuel tanks and transformers. | MM 4.11-6 Spill Prevention, Control, and Countermeasures Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a Spill Prevention, Control, and Countermeasures Plan to the U.S. Environmental Protection Agency, the California Environmental Protection Agency, the BLM, the Kern County Planning and Community Development Department, and to the Kern County Environmental Health Services Department for review. The Plan will be for the storage and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater. The purpose of the plan will be to mitigate the potential effects of a spill of transformer oil, gasoline, or diesel fuel. The Plan shall include design features of the project that will contain accidental releases of petroleum and transformer oil products from onsite fuel tanks and transformers. | USEPA and CalEPA are not typical recipients of SPCC Plans. |
| 4.11.11 | 4.11-33 | MM 4.11-7 Aviation and Hazardous Materials Storage. Prior to issuance of building permits, the project proponent shall submit documentation of the following: 1. The project proponent shall submit documentation to the Kern County Planning and Community Development Department and the BLM demonstrating receipt of a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA) of Form 7460 1 (Notice of Proposed | MM 4.11-7 Aviation and Hazardous Materials Storage. Prior to issuance of building permits, the project proponent shall submit documentation of the following: 1. The project proponent shall submit documentation to the Kern County Planning and Community Development Department and the BLM demonstrating receipt of a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA) of Form 7460 1 (Notice | |

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| | | <p>Construction or Alteration). Documentation shall also be furnished to the Kern County Planning and Community Development Department and the BLM demonstrating that a copy of the approved form(s) has been provided to the United States Department of Defense, Edwards Air Force Base, and the Mojave Air and Space Port. All project components shall have lighting and marking required by the Federal Aviation Administration so not to create a hazard to air navigation.</p> <p>2. No wind turbine generators shall be constructed within the boundaries of the Kern County Airport Land Use Compatibility Plan.</p> <p>3. The project proponent shall provide evidence that all fueling, hazardous materials storage areas, and operation and maintenance activities involving hazardous materials will be sited at least 100 feet away from blue-line drainages, as identified on U.S. Geological Survey topography maps and wetlands.</p> | <p>of Proposed Construction or Alteration). Documentation shall also be furnished to the Kern County Planning and Community Development Department and the BLM demonstrating that a copy of the approved form(s) has been provided to the United States Department of Defense, Edwards Air Force Base, and the Mojave Air and Space Port. All project components shall have lighting and marking required as <u>recommended</u> by the Federal Aviation Administration so not to create a hazard to air navigation.</p> <p>2. No wind turbine generators shall be constructed within the boundaries of the Kern County Airport Land Use Compatibility Plan <u>that would conflict with provisions of that plan</u>.</p> | <p>Please revise (2) because WTGs could be constructed within Plan area if that construction does not conflict with the Plan.</p> |
| 4.11.11 | 4.11-33 | <p>MM 4.11-8 Hazardous Materials Management and Property Taxes. The project proponent shall continuously comply with the following during construction and operation of the project:</p> <p>1. In order to eliminate the risk of generating disease vectors at the site, the Project proponent shall ensure that trash is stored in closed containers and removed from the site at regular intervals. Open containers shall be inverted and construction ditches shall not be allowed to accumulate water. Construction and maintenance operations shall not generate standing water. Naturally occurring</p> | <p>MM 4.11-8 Hazardous Materials Management and Property Taxes. The project proponent shall continuously comply with the following during construction and operation of the project:</p> <p>1. In order to eliminate the risk of generating disease vectors at the site, the Project proponent shall ensure that trash is stored in closed containers and removed from the site at regular intervals. Open containers shall be inverted and construction ditches shall not be allowed to accumulate water. Construction and maintenance operations shall not generate</p> | |

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| | | <p>depressions, drainages, and pools at the site shall not be drained or filled without consulting with the appropriate resource agency (BLM, Kern County, U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG)) and obtaining the appropriate permits. The environmental monitor will ensure that standing water and large quantities of trash do not accumulate on site. Project compliance shall be verified by the Kern County Building Inspection Department during any on-site inspections.</p> <p>2. Should any additional abandoned or unrecorded wells be uncovered or damaged during excavation or grading, the project proponent shall immediately contact the Department of Oil, Gas, and Geothermal Resources. The project proponent shall comply with established Federal, State, or local procedures for the handling and disposal of any discovered hazardous wastes.</p> <p>3. If, during grading or excavation work, the contractor observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected, work near the excavation site shall be terminated, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the contractor's Health & Safety Officer. Samples shall be collected by an Occupational Safety and Health Administration-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not</p> | <p>standing water. Naturally occurring depressions, drainages, and pools at the site shall not be drained or filled without consulting with the appropriate resource agency (BLM, Kern County, U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG)) and obtaining the appropriate permits. The environmental monitor will ensure that standing water and large quantities of trash do not accumulate on site. Project compliance shall be verified by the Kern County Building Inspection Department during any on-site inspections.</p> <p>2. Should any additional abandoned or unrecorded wells be uncovered or damaged during excavation or grading, the project proponent shall immediately contact the Department of Oil, Gas, and Geothermal Resources. The project proponent shall comply with established Federal, State, or local procedures for the handling and disposal of any discovered hazardous wastes.</p> <p>3. If, during grading or excavation work, the contractor observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected, work near the excavation site shall be terminated <u>suspended</u>, the work area cordoned off, and appropriate health and safety procedures implemented for the location by the contractor's Health & Safety Officer. Samples shall be collected by an Occupational Safety and Health Administration-trained individual with a minimum of 40-hours hazardous material site worker training. Laboratory data from suspected contaminated material shall be</p> | <p>See suggested revisions. Modified text provides for work to resume.</p> |

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| | | <p>present, work may proceed at the site. However, if contamination is detected above regulatory limits, the BLM and the Kern County Public Health Division shall be notified. All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the BLM for federal lands and the Kern County Public Health Division for County lands.</p> <p>4. Payment of property taxes has been determined to be sufficient to mitigate impacts to fire, sheriff and emergency services for the wind component of the project.. Written verification of ownership of the project shall be submitted to the Kern County Planning and Community Development Department by April 30 of each calendar year. If the project is sold to a city, county, or utility company that pays assessed taxes that equal less than \$5,000 per turbine per year, then they will pay those taxes plus an amount necessary to equal the equivalent of \$5,000 per turbine. The amount shall be paid for all years of operation. That amount shall be adjusted annually for inflation using the U.S Cities Average -All Urban Consumers (CPI-U) Consumer Price Index provided by the U.S Bureau of Labor Statistics. The fee shall be paid to the Kern County Auditor/Controller by April 30 of each calendar year.</p> <p>5. During construction activities, the project proponent shall reduce construction waste transported to landfills by recycling solid waste construction materials to the extent feasible, such as taking materials to recycling and reuse locations listed in the brochure on recycling construction and demolition materials available on the Kern County Waste</p> | <p>reviewed by the contractor's Health and Safety Officer. If the sample testing determines that contamination is not present, work may proceed at the site. However, if contamination is detected above regulatory limits, the BLM and the Kern County Public Health Division shall be notified <u>and a plan for remediation shall be developed so that work may be continued.</u></p> <p>All actions related to encountering unanticipated hazardous materials at the site shall be documented and submitted to the BLM for federal lands and the Kern County Public Health Division for County lands.</p> <p>4. Payment of property taxes has been determined to be sufficient to mitigate impacts to fire, sheriff and emergency services <u>for the project for the wind component of the project.. Written notification of change of ownership shall be submitted to Kern County within 30 days of occurrence. verification of ownership of the project shall be submitted to the Kern County Planning and Community Development Department by April 30 of each calendar year.</u> If the project is sold to a city, county, or utility company that pays assessed taxes that equal less than \$5,000 per turbine per year, then they will pay those taxes plus an amount necessary to equal the equivalent of \$5,000 per turbine. The amount shall be paid for all years of operation. That amount shall be adjusted annually for inflation using the U.S Cities Average -All Urban Consumers (CPI-U) Consumer Price Index provided by the U.S Bureau of Labor Statistics. The fee shall be paid to the Kern County Auditor/Controller</p> | <p>See suggested revisions. Annual reports are onerous; the Applicant will provide written notification of change of ownership within 30 days.</p> |

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| | | <p>Management Department Web site.</p> <p>6. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide a fenced storage area for recyclable materials that is clearly identified for recycling. This area shall be maintained on the site during construction and operations. A site plan showing the recycling storage area shall be submitted to the Kern County Planning and Community Development Department and Kern County Waste Management Department.</p> | by April 30 of each calendar year. | |
| 4.14.11 | 4.14-15 | <p>MM 4.14-1 Geotechnical Study. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a full <i>Geotechnical Study</i> to evaluate soil conditions and geologic hazards on the project site. The Study shall be prepared and signed by a California-registered professional engineer and shall be submitted for review to: (1) the BLM for federal lands; and, (2) the Kern County Engineering, Surveying, and Permit Services Department for County lands. The Study shall identify the following:</p> <ol style="list-style-type: none"> 1. Location of fault traces and potential for surface rupture; 2. Maximum considered earthquake and associated ground acceleration; 3. Potential for seismically induced ground shaking, liquefaction, landslides, differential settlement, and mudflows; 4. Stability of existing cut-and-fill slopes; 5. Collapsible or expansive soils; 6. Foundation material type; | <p>MM 4.14-1 Geotechnical Study. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a full <u>construction-appropriate</u> <i>Geotechnical Study</i> to evaluate soil conditions and geologic hazards on the project site. The Study shall be prepared and signed by a California-registered professional engineer and shall be submitted for review to: (1) the BLM for federal lands; and, (2) the Kern County Engineering, Surveying, and Permit Services Department for County lands. The Study shall identify the following:</p> <ol style="list-style-type: none"> 1. Location of fault traces and potential for surface rupture; 2. Maximum considered earthquake and associated ground acceleration; 3. Potential for seismically induced ground shaking, liquefaction, landslides, differential settlement, and mudflows; 4. Stability of existing cut-and-fill slopes; | See suggested clarification. Clarified text to reflect that a construction-appropriate study, which is typical for projects such as AEWP, would be conducted. |

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| | | <p>7. Potential for wind erosion, water erosion, sedimentation, and flooding;</p> <p>8. Location and description of unprotected drainages that could be impacted by the Project; and,</p> <p>9. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground.</p> <p>10. Identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of Project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems.</p> | <p>5. Collapsible or expansive soils;</p> <p>6. Foundation material type;</p> <p>7. Potential for wind erosion, water erosion, sedimentation, and flooding;</p> <p>8. Location and description of unprotected drainages that could be impacted by the Project; and,</p> <p>9. Recommendations for placement and design of facilities, foundations, and remediation of unstable ground.</p> <p>10. Identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures for protection of reinforcement, concrete, and metal-structural components against corrosion shall be utilized, such as use of corrosion-resistant materials and coatings, increased thickness of Project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems.</p> | |
| 4.14.11 | 4.14-15 | <p>MM 4.14-2 Conduct Studies to Assess Soil Characteristics and Aid in Appropriate Foundation Design. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall demonstrate compliance with the following:</p> <p>1. The final siting of project facilities based on the results of the geotechnical study and implement measures to minimize geologic hazards. The Project proponent shall not locate project facilities on or immediately adjacent to a fault trace. The BLM and Kern County Engineering, Surveying, and Permit Services Department will evaluate any final facility siting design developed prior to the</p> | | |

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| | | <p>issuance of any grading or building permits or Notices to Proceed to verify that geological constraints have been avoided.</p> <p>2. The project proponents shall design cut-and-fill slopes for an adequate factor of safety, considering material type and compaction, identified during the site-specific geotechnical study. The slope of cut surfaces shall be no steeper than 2:1 (horizontal to vertical), unless the project proponents furnish a soils engineering or an engineering geology report, or both, stating that the site has been investigated and given an opinion that a cut at a steeper slope will be stable, if acceptable stabilization methods are employed and it will not create a hazard to public or private property. Other potential considerations would include structures set back from the slopes, and subsequent design recommendations.</p> <p>3. The project proponents shall avoid locating roads and structures near landslide and mudflow areas. Where avoidance of landslide areas is not feasible, the project proponents shall construct relatively flat cut-and-fill slopes not to exceed 2:1 (horizontal to vertical), or 26 percent, or flatter.</p> <p>4. The project proponents will not locate turbines, transmission lines, and/or associated structures across faults, lineaments, or unstable areas.</p> <p>5. That the utility lines have been designed to withstand vertical and horizontal displacement. If determined necessary by the findings of the site-specific geotechnical study, the project proponent shall remove and replace shrink-swell soils with a non-expansive or non-collapsible soil material.</p> | <p>5. That the utility lines <u>crossing potentially active faults shall be</u> have been designed to withstand vertical and horizontal displacement. If determined necessary by the findings of the site-specific geotechnical study, the project proponent shall remove and replace shrink-swell soils with a non-</p> | <p>Revised to clarify that this MM applies to utility lines crossing active fault lines.</p> |

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| | | | expansive or non-collapsible soil material. | |
| 4.15.11 | 4.15-11 | MM 4.15-1 Grazing Plan for Private Lands. Prior to issuance of grading permits, the Project Proponent shall work together with the area grazing permittees to develop Best Management Practices for grazing activities which occur on private lands, and submit a guidance document to Kern County Planning and Community Development Department for review. | MM 4.15-1 Grazing Plan for Private Lands. Prior to issuance of grading permits, the Project Proponent shall work together with the area grazing permittees to develop Best Management Practices for grazing activities which occur on private lands, and submit a guidance document to Kern County Planning and Community Development Department for review. | Recommend deletion of this measure. There is no private land grazing on the AEWPs site. |
| 4.16.11 | 4.16-16 | MM 4.16-1 Construction Traffic Control Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall prepare and submit a <i>Construction Traffic Control Plan</i> to the Kern County Roads Department and to the California Department of Transportation for review. The Construction Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook (WATCH) Manual and shall include detailed information on the following: <ol style="list-style-type: none"> 1. Timing and schedule of heavy equipment and building materials deliveries; 2. Directing construction traffic with a flag person; 3. Placement of temporary signing, lighting, and traffic control device placement as required; including, but not limited to: appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; 4. Determination of the need for construction work hours and arrival/departure times outside peak traffic | | |

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| | | <p>periods;</p> <p>5. Ensure access for emergency vehicles to the project site;</p> <p>6. Temporary closure of travel lanes or disruptions to street segments and intersections during materials delivery, transmission line stringing activities, or any other utility connections;</p> <p>7. Maintain access to adjacent property;</p> <p>8. Specification of both construction-related vehicle travel and oversize load haul routes, the minimization of construction traffic during the A.M. and P.M. peak hour, distributing construction traffic flow from State Routes 14 and 58 across alternative routes to access the project site, minimizing use of Oak Creek Road, and avoiding residential neighborhoods to the maximum extent feasible; and</p> <p>9. Identification of vehicle safety procedures for entering and exiting site access roads.</p> <p>10. Provisions for the establishment of a traffic control coordinator. The traffic control coordinator shall be responsible for responding to any local complaints about project construction and operational traffic concerns. The traffic control coordinator shall determine the cause of the traffic complaint and shall be required to implement reasonable measures to resolve the complaint. Signs posted along the project construction and operations access routes shall list the telephone number for the traffic control coordinator.</p> | <p>10. Provisions for the establishment of a traffic control coordinator. The traffic control coordinator shall be responsible for responding to any local complaints about project construction and operational traffic concerns. The traffic control coordinator shall determine the cause of the traffic complaint and shall be required to implement reasonable measures to resolve the complaint. Signs posted at the entry to the jobsite along the project construction and operations access routes shall list the telephone number for the traffic control coordinator.</p> | <p>See suggested revisions. Revised text clarifies locations of where signs will be posted. Signs posted on access routes can be confusing since there are multiple projects under construction in the project area.</p> |
| 4.16.11 | 4.16-2 | <p>MM 4.16-2 Pavement Index Assessment. Prior to the issuance of grading or building</p> | <p>MM 4.16-2 Pavement Index Assessment. Prior to the issuance of grading or building</p> | <p>Applicant suggests deleting. The load bearing capacities of the County's roadways</p> |

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| | | permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a pavement index assessment and load rating analysis to ensure all access points can accommodate construction related truck traffic. The traffic index assessment shall determine the required pavement structure required to accommodate the additional truck trips and then implement pavement repairs to achieve save passage of construction-related truck traffic. The project proponent shall implement all recommendations of the pavement including roadway rehabilitation or other structural improvements. The project proponent shall coordinate with all applicable affected jurisdictions (such as the Los Angeles Department of Water and Power and Caltrans) and shall obtain any required permits prior to construction of improvements. The project proponent shall implement appropriate wheel load weight distribution and/or physical improvements to aqueduct crossings to ensure such crossings are adequately protected. | permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall conduct a pavement index assessment and load rating analysis to ensure all access points can accommodate construction related truck traffic. The traffic index assessment shall determine the required pavement structure required to accommodate the additional truck trips and then implement pavement repairs to achieve save passage of construction-related truck traffic. The project proponent shall implement all recommendations of the pavement including roadway rehabilitation or other structural improvements. The project proponent shall coordinate with all applicable affected jurisdictions (such as the Los Angeles Department of Water and Power and Caltrans) and shall obtain any required permits prior to construction of improvements. The project proponent shall implement appropriate wheel load weight distribution and/or physical improvements to aqueduct crossings to ensure such crossings are adequately protected. | are already classified. |
| 4.16.11 | 4.16-17 | 4.14-3 Obtain Applicable Permits. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall obtain all applicable permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials for that phase. The project | 4.16-3 Obtain Applicable Permits. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, t The project proponent shall obtain all applicable <u>transportation</u> permits from the California Department of Transportation, Kern County, and any other applicable agencies pertaining to vehicle sizes, weights, roadway encroachment, and travel routes needed for the first phase of construction. The project proponent shall also obtain any additional permits needed for each remaining phase of construction prior to delivery and acceptance of materials | Error in Mitigation numbering. See revised text. Obtaining transportation permits before building and grading permits would require the applicant to obtain transportation permits much earlier in the sequence of construction than is practical or typical. For example, transportation permits for certain components such as towers or blades may occur months after issuance of grading permits. |

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| | | proponent shall continuously adhere to all conditions of said permits throughout implementation of the project. | for that phase. The project proponent shall continuously adhere to all conditions of said permits throughout implementation of the project. | |
| 4.16.11 | 4.16-18 | MM 4.16-5 Coordinate With Railroad. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and coordinate with Union Pacific Railroad and the California Public Utility Commission Rail Crossings Engineering Section a crossing safety plan for all phases of project construction to address foot traffic as well as construction-related vehicle crossing and the transport of heavy/oversize loads that may occur over Union Pacific rail line as well as obtaining all required permits. | MM 4.16-5 Coordinate With Railroad. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and coordinate with Union Pacific Railroad and the California Public Utility Commission Rail Crossings Engineering Section a crossing safety plan for all phases of project construction to address foot traffic as well as construction-related vehicle crossing and the transport of heavy/oversize loads that may occur over Union Pacific rail line as well as obtaining all required permits. | CPUC typically is involved for modification to or creation of a new crossing. |
| 4.17.3.2 | 4.17-2 | Construction activities associated with the AEWP would result in direct temporary and permanent losses of native vegetation (Figure 4.17-1). | Construction activities associated with the AEWP would result in direct temporary and permanent losses of native vegetation (Figure 4.17-1). | Suggest deleting reference to Figure 4.17-1 since there is no figure included in Appendix A. Should the correct reference be to Table 4.17-1? |
| 4.17.3.2 | 4.17-3 | Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1, while all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1. | Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1 or as identified in the California Department of Fish and Game Streambed Alteration Agreement. , while a All other native habitats supporting burrowing owl and/or desert tortoise shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. non-native habitats supporting | See suggested revision. Text was revised to mirror MM 4.17-1 text. |

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| | | | burrowing owl and/or desert tortoise would be mitigated at 1:1. | |
| 4.17.11 | 4.17-23 | <p>MM 4.17-2 Joshua Tree Preservation Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall develop and submit a <i>Joshua Tree Preservation Plan</i> to the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a qualified biologist or botanist and shall include provisions for the following:</p> <ol style="list-style-type: none"> 1. Documentation of the location and acreage of Joshua tree woodland that would be subject to permanent disturbance and a description of the field methods used to delineate acreage of Joshua tree woodland. Specific methods shall be specified for avoiding Joshua tree woodlands and suitable candidates for translocation identified. 2. Specific efforts that will be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation should be flagged for protection. When non-native vegetation is removed or disturbed, then native vegetation shall be the replacement. 3. Disclosure of the amount of acres of Joshua tree woodland to be removed. This quantification shall be used for compensation purposes. 4. The plan shall specify that a qualified biologist shall monitor construction and all Joshua trees removed or damaged shall be recorded and replaced at appropriate mitigation ratios as specified below. 5. Compensatory mitigation strategy, based | <p>MM 4.17-2 Joshua Tree Preservation <u>Woodland Protection</u> Plan. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall develop and submit a <i>Joshua Tree Preservation Plan</i> to the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a qualified biologist or botanist and shall include provisions for the following:</p> <ol style="list-style-type: none"> 5. Compensatory mitigation strategy, based | See suggested revisions. Text was revised to mirror similar mitigation measures in other Kern County environmental documents. |

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| | | <p>on one or both of the following options:</p> <p>a. <i>Preservation.</i> On-site or off-site preservation of Joshua tree woodland habitat shall occur on parcels within Kern County that contain, at minimum, the number of individual Joshua trees impacted by the project. The project proponent may mitigate all or part of the project's impacts to Joshua trees, as follows: Delineate and designate one or more parcels for dedication for permanent conservation management; establish a conservation easement on those parcels, the easement to be held and managed by a suitable management entity as determined by the Director of the Kern County Planning and Community Development Department; prepare and implement a Habitat Management Plan to maintain habitat conditions on the site in perpetuity; and provide a non-wasting endowment sufficient to implement the habitat management plan in perpetuity. The mitigation lands shall provide habitat at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio. The Plan shall specify maintenance and monitoring requirements for each parcel, which shall include but shall not be limited to fencing and access control; signage; security and enforcement; weed control; control measures for feral</p> | <p>on one or both of the following options:</p> <p>a. <i>Preservation.</i> On-site or off-site preservation of Joshua tree woodland habitat shall occur on parcels within Kern County that contain, at minimum, the number of individual Joshua trees impacted by the project. The project proponent may mitigate all or part of the project's impacts to Joshua trees, as follows: Delineate and designate one or more parcels for dedication for permanent conservation management; establish a conservation easement on those parcels, the easement to be held and managed by a suitable management entity as determined by the Director of the Kern County Planning and Community Development Department; prepare and implement a Habitat Management Plan to maintain habitat conditions on the site in perpetuity; and provide a non-wasting endowment sufficient to implement the habitat management plan in perpetuity. The mitigation lands shall provide habitat at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio. The Plan shall specify maintenance and monitoring requirements for each parcel, which shall include but shall not be limited to fencing and access control; signage; security and enforcement; weed control; control measures for feral animals or pets;</p> | <p>On adjacent wind projects, the Applicant has not been limited to preservation to just within Kern County.</p> |

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| | | <p>animals or pets; native habitat enhancement; fire prevention and management; and other long-term habitat considerations as appropriate.</p> <p>b. <i>In lieu monetary funding.</i> The project proponent(s) may mitigate all or part of the project's impacts to Joshua tree woodlands by funding the acquisition and management in perpetuity of Joshua tree woodland habitat or habitats similar to those that contain impacted Joshua trees on site. Funding and management shall be provided through an existing mitigation bank (e.g., as managed by the City of Lancaster Parks, Recreation and Arts Department) or through a third-party entity such as the Wildlife Conservation Board or a regional Land Trust. The in-lieu fee shall provide sufficient funds to acquire appropriate lands to provide habitats containing Joshua trees at a 1:1 ratio for impacted lands, comparable to habitat to be impacted by the project (i.e., similar abundance and size of Joshua trees, similar dominant vegetation community, similar levels of disturbance or habitat degradation). Suitable mitigation lands provided for other species may be used for Joshua tree woodland mitigation, at a 1:1 ratio.</p> <p>6. The creation or restoration of all habitats, as mitigation for both temporary and permanent impacts, shall be monitored until established success criteria are met, to assess progress and identify potential problems with the restoration site. Remedial activities (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of</p> | <p>native habitat enhancement; fire prevention and management; and other long-term habitat considerations as appropriate.</p> | |

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| | | the restoration effort. If the mitigation fails to meet the established performance criteria within the established maintenance and monitoring period, monitoring shall extend beyond the initial period until the criteria are met or unless otherwise approved by Kern County and the California Department of Fish and Game. | | |
| 4.17.3.2 | 4.17-6 | Given the anticipated impacts to CDFG jurisdictional areas, the project proponent would be required to obtain a Streambed Alteration Agreement from the CDFG in accordance with Section 1600 of the California Fish and Game Code. | Given the anticipated impacts to CDFG jurisdictional areas, the project proponent would <u>notify the CDFG if there are impacts to waters of the state and be required to</u> obtain a Streambed Alteration Agreement from the CDFG in accordance with Section 1600 of the California Fish and Game Code. | See suggested modification, which clarifies permitting process. |
| 4.17.11 | 4.17-25 | MM 4.17-3 Pre-Construction Surveys and Minimization Measures for Special-Status Plants. Prior to issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species (i.e., state and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plant species, Bureau of Land Management Sensitive species, and California Rare Plant Rank 1B, 2, 3, and 4 species) within 100-feet of all surface-disturbing activities. Surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and the California Native Plant Society. Populations of special-status plants must be flagged and mapped prior to construction. A report of the special-status plants observed during the referenced surveys shall be prepared and | MM 4.17-3 Pre-Construction Surveys and Minimization Measures for Special-Status Plants. Prior to issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species (i.e., state and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plant species, Bureau of Land Management Sensitive species, and California Rare Plant Rank 1B, 2, 3, and 4 species) within 100-feet of all surface-disturbing activities. Surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and the California Native Plant Society. Populations of special-status plants must be flagged and mapped prior to construction. A report of the special-status plants observed during the referenced | Suggest deletion. All necessary surveys have been completed and rare plants have been mapped. |

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| | | <p>submitted to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, and the appropriate resource agencies prior to the start of construction. Impacts to non-listed special-status plant species shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeded with locally collected seed stock.</p> <p>If AEWP activities will result in loss of more than 10 percent (10%) of the known individuals within an existing population of a California Native Plant Society List 1B, 2, 3, or 4 plant species, the project proponent shall preserve existing on- or off-site occupied habitat that is not already part of the public lands in perpetuity at a 1:1 mitigation ratio for California Rare Plant Rank 1B and 2 species and California Rare Plant Rank 3 and 4 species. The preserved habitat shall be occupied by the plant species impacted, and be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by the qualified biologist.</p> <p>If Bakersfield cactus is identified within the construction area, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management to demonstrate how the following measures to reduce impacts to the Bakersfield cactus shall be implemented:</p> <p>1. The project proponent(s) shall work with the designated biologist(s) to identify all known Bakersfield cactus and to establish</p> | <p>surveys shall be prepared and submitted to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, and the appropriate resource agencies prior to the start of construction. Impacts to non-listed special-status plant species shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeded with locally collected seed stock.</p> <p>If AEWP activities will result in loss of more than 10 percent (10%) of the known individuals within an existing population of a California Native Plant Society List 1B, 2, 3, or 4 plant species, the project proponent shall preserve existing on- or off-site occupied habitat that is not already part of the public lands in perpetuity at a 1:1 mitigation ratio for California Rare Plant Rank 1B and 2 species and California Rare Plant Rank 3 and 4 species. The preserved habitat shall be occupied by the plant species impacted, and be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by the qualified biologist.</p> <p>If Bakersfield cactus is identified within the construction area, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management to demonstrate how the following measures to reduce impacts to the Bakersfield cactus shall be implemented:</p> <p>1. The project proponent(s) shall work with the designated biologist(s) to identify all</p> | |

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| | | <p>“avoidance areas.” All Bakersfield cacti found within the WE-corridor shall be avoided by a buffer of 25 feet through micro-siting activities within the project area. Sturdy, highly visible, orange plastic construction fencing shall be installed around all Bakersfield cactus avoidance areas and shall be located in accordance with direction from the designated biologist(s). The fence shall be securely staked and installed in a durable manner that would be reasonably expected to withstand wind and weather events and last at least through the construction period. Fencing shall be removed upon completion of the project construction.</p> <p>2. <i>Bakersfield Cactus Translocation.</i> Any Bakersfield cactus that cannot feasibly be avoided during construction shall be translocated according to the California Department of Fish and Game’s “Cactus Translocation (Revegetation)” guidelines, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. Cacti shall be translocated to a suitable, California Department of Fish and Game-approved site.</p> | <p>known Bakersfield cactus and to establish “avoidance areas.” All Bakersfield cacti found within the WE-corridor shall be avoided by a buffer of 25 feet through micro-siting activities within the project area. Sturdy, highly visible, orange plastic construction fencing shall be installed around all Bakersfield cactus avoidance areas and shall be located in accordance with direction from the designated biologist(s). The fence shall be securely staked and installed in a durable manner that would be reasonably expected to withstand wind and weather events and last at least through the construction period. Fencing shall be removed upon completion of the project construction.</p> <p>2. Bakersfield Cactus Translocation. Any Bakersfield cactus that cannot feasibly be avoided during construction shall be translocated according to the California Department of Fish and Game’s “Cactus Translocation (Revegetation)” guidelines, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion. Cacti shall be translocated to a suitable, California Department of Fish and Game-approved site.</p> | |
| 4.17.11 | 4.17-26 | <p>MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for</p> | <p>MM 4.17-4 Best Management Practices for Activities In or Near Ephemeral Drainages. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed by the BLM, the project proponent shall implement all mitigation measures and conditions contained within the Streambed Alteration Agreement obtained from the California Department of Fish and Game for</p> | <p>Suggest modifying because there are likely to be measures in the SAA that cannot be implemented prior to the issuance of building and grading permits.</p> |

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| | | <p>impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages:</p> <ol style="list-style-type: none"> 1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement. 2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible. 3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows. 4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages. 5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages. 6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage. | <p>impacts to jurisdictional areas. In addition, the following Best Management Practices shall be implemented during all construction activity in or near ephemeral drainages:</p> <ol style="list-style-type: none"> 1. Vehicles and equipment shall not be operated in ponded or flowing water except as described in the Streambed Alteration Agreement. 2. The project proponent shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible. 3. The project proponent shall not allow water containing mud, silt, or other pollutants from grading or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows. 4. Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages. 5. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages. 6. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage. | |

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| | | 7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow. | 7. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow. | |
| 4.18.3.3 | 4.18-3 through 4.18-4 | Concluding sentence for KOPs 2-5, and 7: “...., overall AEWP contrast was considered moderate.” | Concluding sentence for KOPs 2-5, and 7: “...., overall AEWP contrast was considered moderate strong.” | Please see suggested revisions. The most recent VRM analysis (Feb 2012), which reflects and responds to all previous comments provided by BLM, concludes that the contrast resulting from the project would be “strong” in views from KOPs 1-6, and “moderate” in KOP 7. |
| 4.18.11 | 4.18-20 | <p>MM 4.18-1 Reduction of Visual Contrast, Light, and Glare. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide evidence of the following:</p> <p>a. The project proponent shall identify construction laydown areas using already disturbed and/or are in locations of low visual sensitivity.</p> <p>b. For overhead transmission lines, tubular steel poles shall be used instead of lattice steel towers. Tubular steel poles shall be painted light-gray colors or shall be dulled galvanized steel or other non-reflective surface. All aboveground structures (tubular steel poles, cross-arms, insulators, etc.) specified for this project shall be made of materials that do not reflect or refract light. All conductors specified for the project shall be non-specular, that is, they shall be treated at the factory to dull their surfaces to reduce their potential to reflect light.</p> <p>c. The Project Proponent shall submit to the BLM for review and approval a lighting</p> | <p>MM 4.18-1 Reduction of Visual Contrast, Light, and Glare. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall provide evidence of the following:</p> <p>a. The project proponent shall identify construction laydown areas using already disturbed and/or are in locations of low visual sensitivity.</p> <p>b. For overhead transmission lines lattice towers should not be used. ,tubular steel poles shall be used instead of lattice steel towers. Tubular steel <u>Transmission</u> poles shall be painted light-gray colors or shall be dulled galvanized steel or other non-reflective surface. All aboveground structures (tubular steel transmission poles, cross-arms, insulators, etc.) specified for this project shall be made of materials that do not reflect or refract light. All conductors specified for the project shall be non-specular, that is, they shall be treated at the factory to dull their surfaces to reduce their potential to reflect light.</p> | Overhead transmission lines should not be limited to tubular steel poles; this measure should allow for flexibility for other types of structures, including wooden poles, concrete poles, or steel and concrete hybrid poles. |

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| | | <p>mitigation plan that includes the following:</p> <ol style="list-style-type: none"> 1. Location and direction of light fixtures that take the lighting mitigation requirements into account; 2. Lighting design that considers setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements; 3. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; 4. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the Project boundary, except where necessary for security; 5. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and 6. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. | <p>c. The Project Proponent shall submit to the BLM for review and approval a lighting mitigation plan that includes the following:</p> <ol style="list-style-type: none"> 1. Location and direction of light fixtures that take the lighting mitigation requirements into account; 2. Lighting design that considers setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements; 3. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; 4. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the Project boundary, except where necessary for security; 5. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and 6. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. <p><u>7. None of the above measures shall be applied in conflict with any FAA lighting requirements.</u></p> | <p>Applicant suggests addition of #7, to clarify that none of the previous measures can conflict with FAA lighting requirements.</p> |

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| 4.18.11 | 4.18-21 | <p>MM 4.18-5 Evaluate and Implement PCT Route Enhancement. Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail.</p> <p>If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one year of issuance of the first wind turbine</p> | <p>MM 4.18-5 Evaluate and Implement PCT Route Enhancement. Prior to the issuance of a Notice to Proceed by the BLM, the project proponent shall consult and coordinate with the U.S. Forest Service, the BLM, and the Pacific Crest Trail Association to develop a route enhancement plan for the Pacific Crest Trail. The plan shall be submitted for review and approval to the BLM and U.S. Forest Service prior to commissioning of the wind turbines. The report shall identify feasible PCT options, developed under the direction of the federal agencies, which provide for trail relocations, enhancements, or additions that will benefit visitors. The provisions shall be designed to apply to those areas where the project would be most visible from the existing trail.</p> <p>If directed by the BLM, the project proponent shall be responsible for constructing those new trail segments, enhancements, or modifications and restorations as identified in the final approved plan. All construction, restoring and disturbance activities shall be conducted in manner acceptable to the BLM and U.S. Forest Service. Any Trail construction, restoration, enhancement or modifications shall be completed within one</p> | <p>The Applicant suggests deletion. The PCT is not located within the project area and is not directly impacted by the project.</p> |

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| | | generator building permit. | year of issuance of the first wind turbine generator building permit. | |
| 4.19.11 | 4.19-35 | <p>MM 4.19-2 Submit a Road Plan to the BLM and Kern County for Review. Prior to the issuance of grading/building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall submit a <i>Road Plan</i> to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. The Road Plan shall include the following components:</p> <ol style="list-style-type: none"> 1. A map/plot plan that identifies the precise location of all planned access roads and spur roads, as well as any planned improvements to existing roads. 2. A list and description of the specific improvements/modifications that would be undertaken at each location or road segment, including the planned width of each completed segment, the engineered limits of cut and fill, the location of any drainage and/or sensitive habitat within 100-feet of either edge of the planned access or spur road, and the location and construction details of any new or modified stream crossings or drainage diversion structures. 3. Should the road plan propose a “cut” or “fill” of more than twelve (12) inches, or the movement of more than fifty (50) cubic yards of material, the road plan shall be submitted in the form of a grading permit application to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. | <p>MM 4.19-2 Submit a Road Plan to the BLM and Kern County for Review. Prior to the issuance of grading/building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall submit a <i>Road Plan</i> to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. The Road Plan shall include the following components:</p> <ol style="list-style-type: none"> 1. A map/plot plan that identifies the precise location of all planned <u>onsite</u> access roads and spur roads, as well as any planned improvements to existing roads. 2. A list and description of the specific improvements/modifications that would be undertaken at each <u>onsite</u> location or road segment, including the planned width of each completed segment, the engineered limits of cut and fill, the location of any drainage and/or sensitive habitat within 100-feet of either edge of the planned <u>onsite</u> access or spur road, and the location and construction details of any new or modified stream crossings or drainage diversion structures. 3. Should the road plan propose a “cut” or “fill” of more than twelve (12) inches, or the movement of more than fifty (50) cubic yards of material, the road plan shall be submitted in the form of a grading permit application to the BLM and the Kern County Engineering, Surveying, and Permit Services Department for review. | See suggested revisions, which clarify that the measure applies to onsite roads only. |
| 4.19.11 | 4.19-37 | MM 4.19-5 Develop a Water Supply Contingency Plan. Prior to the issuance of | MM 4.19-5 Develop a Water Supply Contingency Plan. Prior to the issuance of | A Water Supply Assessment was completed as part of DEIS/DEIR and shows no |

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| | | building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and submit a <i>Water Supply Contingency Plan</i> to the BLM and the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a hydrogeologist and shall include results from a groundwater investigation of any groundwater resources to be used during project operation and maintenance; groundwater would not be pumped by the Proponent to support project construction or decommissioning. The purpose of the groundwater investigation shall be to determine whether the identified groundwater resource(s) is in overdraft conditions; the investigation may include review of historic groundwater well data, groundwater monitoring, hydrologic modeling, and/or interviews with private well owners. Groundwater resources from basin(s) determined to be in long-term overdraft conditions shall not be used to meet project water supply requirements. Additionally, the plan shall contain provisions for ongoing monitoring of water supply well(s) used during project related operation and maintenance activities, as deemed necessary by Kern County. | building permits from the County and/or a Notice to Proceed from the BLM, the project proponent shall develop and submit a Water Supply Contingency Plan to the BLM and the Kern County Planning and Community Development Department for review. The Plan shall be prepared by a hydrogeologist and shall include results from a groundwater investigation of any groundwater resources to be used during project operation and maintenance; groundwater would not be pumped by the Proponent to support project construction or decommissioning. The purpose of the groundwater investigation shall be to determine whether the identified groundwater resource(s) is in overdraft conditions; the investigation may include review of historic groundwater well data, groundwater monitoring, hydrologic modeling, and/or interviews with private well owners. Groundwater resources from basin(s) determined to be in long-term overdraft conditions shall not be used to meet project water supply requirements. Additionally, the plan shall contain provisions for ongoing monitoring of water supply well(s) used during project related operation and maintenance activities, as deemed necessary by Kern County. | significant impact to groundwater. Suggest deletion of this MM. (CH2M HILL. 2011. <i>Alta East Wind Project Water Supply Assessment</i> . March 22, 2011. Included as Appendix I-1 of the EIS/EIR). |
| 4.20.11 | 4.20-12 | MM 4.20-3 Emergency Response Liaison – Fire. The project proponent shall continuously comply with the following during implementation of the project: When a Red Flag Warning is issued by the National Weather Service for the project area, all non-emergency construction and maintenance activities shall cease. This provision shall be clearly stated in the Fire Safety Plan. The Emergency Response Liaison shall ensure | MM 4.20-3 Emergency Response Liaison – Fire. The project proponent shall continuously comply with the following during implementation of the project: When a Red Flag Warning is issued by the National Weather Service for the project area, all <u>high-fire risk construction and maintenance activities, such as off-road vehicle travel through heavily vegetated areas, blasting or grinding,</u> shall cease. This provision shall be | See suggested text revision to clarify that low-fire construction activities can continue during red flag warning. |

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| | | implementation of a system that allows for immediate receipt of Red Flag Warning information from the Los Angeles/Oxnard office of the National Weather Service. | clearly stated in the Fire Safety Plan. The Emergency Response Liaison shall ensure implementation of a system that allows for immediate receipt of Red Flag Warning information from the Los Angeles/Oxnard office of the National Weather Service. | |
| 4.21.3.2 | 4.21-5 | Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1, while all other native habitats non-native habitats supporting burrowing owl and/or desert tortoise would be mitigated at 1:1. | Permanent impacts to desert wash and riparian habitat would be mitigated at 3:1 <u>or as identified in the California Department of Fish and Game Streambed Alteration Agreement, whichever is greater. , while a</u> All other native habitats non-native habitats supporting burrowing owl and/or desert tortoise <u>shall be mitigated at a 1:1 ratio for permanent impacts, or as otherwise identified in the California Department of Fish and Game Incidental Take Permit or United States Fish and Wildlife Biological Opinion, whichever is greater. would be mitigated at 1:1.</u> | See suggested revision; Text was revised to mirror MM 4.17-1 text. |
| 4.21.3.2 | 4.21-6 | As described above, these measures would require biological monitoring during construction activities, moving ground-dwelling special-status species such as coast horned lizard and silvery legless lizard out of harm's way, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | As described above, these measures would require biological monitoring during construction activities, moving ground-dwelling special-status species such as coast horned lizard and silvery legless lizard out of harm's way, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | Text should be deleted because mitigation measures described above do not include restoration or compensation for these species. |
| 4.21.3.2 | 4-21-6 | It is possible that condors could occasionally forage on or pass through the site, especially as the range of the condor expands with continued population growth; even potentially occupying most or all of its | It is possible that condors could occasionally forage on or pass through the site, especially <u>as if</u> the range of the condor expands with continued population growth; even potentially occupying most or all of its | Text should be modified to make text consistent with rest of discussion. |

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| | | historic range in California. | historic range in California. | |
| 4.21.3.2 | 4.21-6 to 4.21-7 | As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | Text should be deleted because mitigation measures described above do not include compensation for this species. |
| 4.21.3.2 | 4.21-7 | This species was observed foraging in the project area during fixed-point bird use surveys in all four (4) seasons. | This species was observed foraging in the project area during fixed point bird surveys in all four (4) seasons <u>fall of 2010 and winter of 2010/11.</u> | Text should be modified to clarify that this species was observed off site in year 1 surveys. |
| 4.21.3.2 | 4.21-7 | Indirect impacts to golden eagles could include the loss of foraging habitat due to the establishment of invasive weeds. Night lighting during construction could also result in indirect impacts to golden eagles. | Indirect impacts to golden eagles could include the loss of foraging habitat due to the establishment of Invasive weeds <u>potentially resulting in a decline in prey density.</u> Night lighting during construction could also result in indirect impacts to golden eagles. | See suggested modification to clarify why establishment of invasive weeds may result in loss of foraging habitat. |
| 4.21.3.2 | 4.21-9 | (Swainson's Hawk) The AEWP's direct and indirect construction-related impacts to foraging Swainson's hawks would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As | (Swainson's Hawk) The AEWP's direct and indirect construction-related impacts to foraging Swainson's hawks would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission | Text should be deleted because mitigation measures described above do not include compensation for this species. |

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| | | described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust. | reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio , minimization of impact areas, and control of fugitive dust. | |
| 4.21.3.2 | 4.21-10 | (Nesting Birds) Direct and indirect construction-related impacts to nesting bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust. | (Nesting Birds) Direct and indirect construction-related impacts to nesting bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio , minimization of impact areas, and control of fugitive dust. | Text should be deleted because mitigation measures described above do not include compensation for this species. |
| 4.21 | 4.21-10 | | <u>Wintering Birds</u> <u>The AEWP could result in indirect impacts to wintering bird species protected under California Fish and Game Code sections 3503.5 and 3511 and the Migratory Bird Treaty Act. Construction activities could</u> | The Environmental Setting Section (3.21) in Chapter 3 discusses/describes wintering bird species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21) does not address potential impacts to wintering |

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| | | | <u>cause destruction of winter foraging and roosting habitat and temporary displacement of individuals due to noise and human activity during construction. Several special-status bird species have been documented during winter on the AEWP, including golden eagle, loggerhead shrike, northern harrier peregrine falcon, and prairie falcon. No direct impact to wintering birds, in the form of take, is anticipated during construction. Indirect construction-related impacts to wintering bird species, including special-status species, would be reduced through implementation of Mitigation Measures 4.2-1 (Construction fugitive dust emission reduction), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.21-1 (Designated Biologist), and 4.21-2 (Wildlife Impact Avoidance and Minimization). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, minimization of construction night lighting, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.</u> | bird species. Please consider this suggested text in a new section entitled Wintering Birds, inserted after the Nesting Birds discussion in Section 4.21.3.2 on page 4.21-10 in Chapter 4. |
| 4.21.3.2 | 4.21-11 | (Bats) The AEWP's direct and indirect construction-related impacts to special-status bats would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation | (Bats) The AEWP's direct and indirect construction-related impacts to special-status bats would be reduced by implementation of Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and | Text should be deleted because mitigation measures described above do not include compensation for this species. |

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| | | Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction fugitive dust emission reduction), and 4.2-3 (Operation fugitive dust and equipment emission reduction). As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio , minimization of impact areas, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | |
| 4.21.3.2 | 4.21-11 | (American Badger and Desert Kit Fox) As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | (American Badger and Desert Kit Fox) As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio , minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | Text should be deleted because mitigation measures described above do not include compensation for this species. |
| 4.21.3.2 | 4.21-12 | (Special Status Mice) As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | (Special Status Mice) As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio , minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust. | Text should be deleted because mitigation measures described above do not include compensation for this species. |

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| 4.21.3.2 | 4.21-12 | <p>(Mohave Ground Squirrel)</p> <p>.As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.</p> | <p>(Mohave Ground Squirrel)</p> <p>.As described above, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, minimization of construction night lighting, vehicle speed limits of 15 miles per hour, and control of fugitive dust.</p> | Text should be deleted because mitigation measures described above do not include compensation for this species. |
| 4.21.3.3 | 4.21-14 | The project proponent would consult with CDFG and USFWS to obtain take authorization for potential impacts to listed species through the context of a 2081 take permit from CDFG and a Biological Opinion from the USFWS. | The project proponent would consult with CDFG and USFWS to obtain <u>any necessary</u> take authorization if take of listed species is anticipated for potential impacts to listed species through the context of a 2081 take permit from CDFG and <u>/or</u> a Biological Opinion from the USFWS. | Text should be modified to reflect fact take authorization may or may not be required. |
| 4.21 | 4.21-17 | | <p><u>Wintering Birds</u></p> <p><u>O&M activities could result in direct and indirect impacts to nesting bird species protected under the California Fish and Game Code and Migratory Bird Treaty Act. Indirect impacts to wintering birds could occur during vegetation management or regarding of access roads, which could cause temporary displacement of wintering birds from adjacent wintering habitats. Direct impacts to wintering birds may result from collision with project features. Indirect and direct impacts to wintering bird species would be mitigated through implementation of Mitigation Measures 4.21-6 (Avian and Bat Protection Plan) which requires the preparation of an Avian and Bat Protection Plan (APP) or equivalent document. To</u></p> | The Environmental Setting Section (3.21) in Chapter 3 discusses/describes wintering bird species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21) does not address potential impacts to wintering bird species. Please consider this suggested text in a new section entitled Wintering Birds, inserted after the Nesting Birds discussion in Section 4.21.3.3 on page 4.21-17 in Chapter 4. |

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| | | | <p><u>further reduce this potential impact, Mitigation Measure 4.21-2 (Wildlife Impact Avoidance and Minimization) requires preparation of a WEAP, which includes actions and reporting procedures for impacts to wintering birds. Impacts associated with night lighting during O&M would be minimized through implementation of Mitigation Measures 4.18-1 (Reduction of Visual Contrast, Light, and Glare) and 4.18-4 (Comply with Lighting Standards) as described above.</u></p> <p><u>As with construction, increases in invasive plant species would be indirect impacts to wintering bird species. Impacts associated with invasive plant species during O&M would be minimized through implementation of Mitigation Measure 4.17-5 (Weed Control Plan) as described in Section 4.21.3.2.</u></p> | |
| 4.21.3.3 | 4.21-23 | | <p><u>The applicant has been in on-going discussions with the USFWS to demonstrate and determine the effectiveness of the Monitoring and Avoidance Plan. Field trials performed on July 9, 10, and 11, 2012, at Bitter Creek Wildlife Refuge where condors were present, indicated that the system had a 100 percent success rate for detecting condors. The objective of the test was to evaluate the detection system against a human observer. In every case the VHF detection system recorded a condor occurrence before the human observer could detect it and in many cases, detected the occurrence of a condor that a human observe did not detect. Because almost all free flying condors are fitted with VHF transmitters, detection of a condor by the system is highly dependable. This system</u></p> | <p>Please include additional information on the effectiveness on the condor monitoring system.</p> <p>Suggest insertion of the proposed text prior to the 1st bullet on page 4.21-23.</p> |

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| | | | <p><u>and its protocol will ensure that condor mortality can be avoided.</u></p> <p><u>The results at the Bitter Creek Wildlife Refuge suggest that the system will be 100 percent effective at the project site, as well. Nonetheless, another demonstration of the VHF detection system for the County and FWS is planned for October 3 and 4, 2012 at the project site. The VHF detection system will be installed in early 2013 in order to monitor a large area in all directions from the AEWP to maximize response times should a condor be detected. By design, the detection system will monitor for and report a condor before it can reach the AEWP and as such, it will most often detect a condor that is not headed toward nor threatened by the AEWP but rather traveling to other locations in the surrounding mountainous areas. These other locations may be occupied by operational wind facilities that, if not watched, could pose a threat to condors. Since the detection system is designed to notify a team of observers that will respond and visually track the condor and act accordingly; observers can inform other wind farm operators within the area that a condor is in the vicinity and thereby avoid turbine collisions at other project sites. Over time, the Applicant believes that the VHF detection system has the potential to assist in the avoidance of lethal take of condors from wind projects throughout the region.</u></p> | |
| Table 4.21-1 | 4.21-28 | Table 4.21-1. Summary of CEQA Significance Determinations | <p>Add species listed below to Table 4.21-1 (to correctly mirror those species listed in Table 3.21-1):</p> <p><u>Amphibians</u></p> | The Environmental Setting Section (3.21) in Chapter 3 discusses/describes all of the species that have the potential to exist in the project area (also listed in Table 3.21-1); however, the Impacts Section (4.21; Table |

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| | | | <u>Wintering Birds</u> <u>California Horned Lark</u> <u>Bendire's thrasher</u> <u>Le Conte's thrasher</u> | <p>4.21-1) does not list all of the Chapter 3 species. Please include.</p> <p>In addition, reference to Wintering birds should be included in Table 4.21-1.</p> |
| 4.21.11 | 4.21-43 | <p>4.21.11 Mitigation Measures The AEWP will require incidental take authorization for impacts to listed species through a Biological Opinion (BO) from the USFWS and a 2081 Incidental Take Permit (ITP) from CDFG. The terms and conditions of these authorizations will supersede the mitigation measures identified below. For items that are addressed in the mitigation measures identified below as well as provisions of the BO and/or ITP, the most conservative measure will apply (for example, the highest mitigation ratio would apply). Nonetheless, in compliance with the requirements identified in CEQA, the project proponent will be required to comply with the reporting and documentation standards addressed in the mitigation measures ultimately approved by the Lead Agencies.</p> | <p>4.21.11 Mitigation Measures <u>If required</u>, the AEWP will <u>obtain</u> require incidental take authorization for impacts to listed species through a Biological Opinion (BO) from the USFWS and <u>/or</u> a 2081 Incidental Take Permit (ITP) from CDFG. The terms and conditions of these authorizations will supersede the mitigation measures identified below. For items that are addressed in the mitigation measures identified below as well as provisions of the BO and/or ITP, the most conservative measure will apply (for example, the highest mitigation ratio would apply). Nonetheless, in compliance with the requirements identified in CEQA, the project proponent will be required to comply with the reporting and documentation standards addressed in the mitigation measures ultimately approved by the Lead Agencies.</p> | <p>Suggested modification to reflect that take authorization may or may not be required.</p> |
| 4.21.11 | 4.21-44 | <p>MM 4.21-2 Wildlife Impact Avoidance and Minimization. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management of the following:</p> <p>5. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit a <i>Wildlife Mortality Reporting Program</i> to the Bureau of Land Management</p> | <p>5. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit a <i>Wildlife Mortality Reporting Program</i> to the Bureau of Land</p> | <p>Modification to specify special-status species because intent of MM is to demonstrate compliance with measures relative to special status species, and to provide for</p> |

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| | | <p>and Kern County Planning and Community Development Department for review. This program shall be implemented during construction and operation, and shall require the identification and reporting of any dead or injured animals (both special-status and common species) observed by personnel conducting construction and operation activities. Reporting is necessary during construction and operation to demonstrate compliance with the avoidance and minimization measures, to assess the effectiveness of the measures, and to make recommendations, if necessary, for future compliance. The program shall also include provisions to stop work within the immediate vicinity if a dead special-status species is encountered. An appropriate reporting format shall be developed in coordination with the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game.</p> <p>6. A speed limit of 15 miles per hour will be maintained on all dirt access/maintenance roads, and all vehicles must remain on designated access/maintenance roads.</p> <p>7. Night lighting required during construction shall be directed toward the interior of the disturbance area or at the specific location being constructed in order to minimize adverse effects to wildlife in off-site areas.</p> | <p>Management and Kern County Planning and Community Development Department for review. This program shall be implemented during construction and operation, and shall require the identification and reporting of any dead or injured <u>special-status species animals (both special-status and common species)</u> observed by personnel conducting construction and operation activities. Reporting is necessary during construction and operation to demonstrate compliance with the avoidance and minimization measures, to assess the effectiveness of the measures, and to make recommendations, if necessary, for future compliance. The program shall also include provisions to stop work within the immediate vicinity if a dead special-status species is encountered. <u>The project proponent shall notify the BLM, Kern County Planning Department, the on-call biologist, and the appropriate resources agency (e.g., USFWS or CDFG) before construction is allowed to resume.</u> An appropriate reporting format shall be developed in coordination with the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game.</p> <p>6. A speed limit of 15 miles per hour will be maintained on all dirt access/maintenance roads, and all vehicles must remain on designated access/maintenance roads.</p> <p>7. Night lighting required during construction shall be directed toward the interior of the disturbance area or at the specific location being constructed in order to minimize adverse effects to wildlife in off-site areas.</p> | <p>notification in order to resume work.</p> |

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| 4.21.11 | 4.21-46 | <p>MM 4.21-3 Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and/or the United States Fish and Wildlife Service, that the following pre-construction surveys have been prepared:</p> <p>1. Pre-construction surveys for nesting birds if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season (February 1 to August 31). A qualified biologist shall conduct the breeding bird surveys within three (3) days prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, California Fish and Game Code Sections 3503 and 3503.5, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. Should riparian habitats be encountered on the site, pre-construction nesting surveys for southwestern willow flycatcher, gray vireo, and western yellow-billed cuckoo following the most current United States Fish and Wildlife Service protocols for each species will be conducted. If a nesting listed riparian</p> | <p>1. Pre-construction surveys for nesting birds if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season (February 1 to August 31). A qualified biologist shall conduct the breeding bird surveys within three (3) days <u>no more than 30 days</u> prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, California Fish and Game Code Sections 3503 and 3503.5, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. Should riparian habitats be encountered on the site, pre-construction nesting surveys/sweeps for southwestern willow flycatcher, gray vireo, and western yellow-billed cuckoo following the most current United States Fish and Wildlife Service protocols for each species will be</p> | <p>Suggested text modifications to reflect typical requirements of pre-construction surveys sweeps.</p> |

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| | | <p>bird is detected, a 500-foot disturbance-free buffer will be established and Kern County, California Department of Fish and Game, and/or the United States Fish and Wildlife Service (as appropriate) shall be notified. If nesting birds are encountered during preconstruction nesting surveys and/or sweeps, a 300 foot disturbance-free buffer shall be established around each nest, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. Buffer sizes may be modified in consultation with the California Department of Fish and Game and/or the United States Fish and Wildlife Service.</p> <p>If nesting golden eagles are identified, a 1/4-mile no-activity buffer will be implemented when nests have a direct line of sight to the work area. If the work area is not within direct view of the nest, the no-disturbance buffer shall be 660 feet. Nest buffers for eagles and other nesting birds may be adjusted to reflect existing conditions including ambient noise, topography, and species' disturbance tolerance with the approval of the appropriate resource agencies (California Department of Fish and Game and/or United States Fish and Wildlife Service).</p> <p>Should project construction or operation result in an anticipated need to move a bird nest during nesting season, the project proponent shall first obtain written documentation providing concurrence from the United States Fish and Wildlife Service and the California Department of Fish and Game authorizing the nest relocation. The project proponent shall provide a written report to the Kern County Planning and</p> | <p>conducted. If a nesting listed riparian bird is <u>encountered, the project proponent shall consult with CDFG and/or USFWS to identify appropriate measures to prevent impacts to the species, such as establishing a buffer around occupied nests</u>. detected, a 500-foot disturbance-free buffer will be established and Kern County, California Department of Fish and Game, and/or the United States Fish and Wildlife Service (as appropriate) shall be notified. If nesting birds are encountered during preconstruction nesting surveys and/or sweeps, a 300 foot disturbance-free buffer shall be established around <u>nesting birds each nest</u>, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. Buffer sizes may be modified in consultation with the California Department of Fish and Game and/or the United States Fish and Wildlife Service.</p> | |

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| | | <p>Community Development Department, the United States Fish and Wildlife Service, and the California Department of Fish and Game documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and outcome (whether or not the chicks survived and fledged). Should any applicable Agency determine that the nests cannot be moved, the project proponent shall not move the nests.</p> <p>2. Pre-construction nesting surveys will be conducted within one-half (1/2) mile of areas with potentially suitable nesting habitat for Swainson's hawks no more than 30 days prior to commencement of construction. If a nest site is found, consultation with California Department of Fish and Game and the United States Fish and Wildlife Service shall be required to ensure project construction will not result in nest disturbance. No new disturbances or other project-related activities that may cause nest abandonment or forced fledging shall be initiated within one-half (1/2) mile of an active nest between March 1 and September 15, or unless otherwise authorized by the California Department of Fish and Game and the United States Fish and Wildlife Service, as required. These buffer zones may be adjusted as appropriate in consultation with a qualified ornithologist, the California Department of Fish and Game and the United States Fish and Wildlife Service. If impacts to nesting</p> | <p>2. Pre-construction nesting surveys will be conducted within one-half (1/2) <u>0.25</u>-mile of areas with potentially suitable nesting habitat <u>on lands accessible to the project operator</u> for Swainson's hawks no more than 30 days prior to commencement of construction. If a nest site is found, consultation with California Department of Fish and Game and the United States Fish and Wildlife Service shall be required to ensure project construction will not result in nest disturbance. No new disturbances or other project-related activities that may cause nest abandonment or forced fledging shall be initiated within one-half (1/2) <u>0.25</u>-mile of an active nest between March 1 and September 15, or unless otherwise authorized by the California Department of Fish and Game and the United States Fish and Wildlife Service, as required. These buffer zones may be adjusted as appropriate in consultation with a qualified ornithologist, the California Department of Fish and Game</p> | |

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| | | <p>Swainson's hawks cannot be avoided, the California Department of Fish and Game and the United States Fish and Wildlife Service shall be consulted regarding the potential for incidental take authorization.</p> <p>3. Pre-construction surveys for the Mohave ground squirrel will be conducted within all suitable habitat prior to initial ground-disturbing activities, including along the transmission line route. Surveys shall include a map of all potentially suitable habitat within the project area and along the transmission line route. The name and phone number of the biologist(s) proposed for the survey effort shall be provided to the California Department of Fish and Game and to the United States Fish and Wildlife Service at least 14 days before the initiation of ground-disturbing activities. If a Mohave ground squirrel is found on the construction site, work shall be halted and redirected to areas not supporting this species unless an incidental take authorization from the California Department of Fish and Game and/or the United States Fish and Wildlife Service directs otherwise. A written report shall be sent to California Department of Fish and Game and the United States Fish and Wildlife Service within five (5) calendar days of the sighting. The report will include the date, time of the finding or incident (if known), and location of the animal. If a dead Mohave ground squirrel is encountered the remains shall be collected, frozen as soon as possible, and California Department of Fish and Game and the United States Fish and Wildlife Service shall be contacted to</p> | <p>and the United States Fish and Wildlife Service. If impacts to nesting Swainson's hawks cannot be avoided, the California Department of Fish and Game and the United States Fish and Wildlife Service shall be consulted regarding the potential for incidental take authorization.</p> <p>3. Pre-construction <u>project surveys/sweeps</u> for the Mohave ground squirrel will be conducted within all suitable habitat prior to initial ground-disturbing activities, including along the transmission line route. Surveys shall include a map of all potentially suitable habitat within the project area and along the transmission line route. The name and phone number of the biologist(s) proposed for the survey effort shall be provided to the California Department of Fish and Game and to the United States Fish and Wildlife Service at least 14 days before the initiation of ground-disturbing activities. If a Mohave ground squirrel is found on the construction site, work shall be halted and redirected to areas not supporting this species unless an incidental take authorization from the California Department of Fish and Game and/or the United States Fish and Wildlife Service directs otherwise <u>and project operator shall consult with California Department of Fish and Game and United States Fish and Wildlife Service prior to resuming construction.</u> A written report shall be sent to California Department of Fish and Game and the United States Fish and Wildlife Service within five (5) calendar days of the sighting. The report will include the date, time of the finding or incident (if known), and location of the animal. If a dead Mohave ground squirrel is encountered the</p> | |

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| | | <p>determine where the remains will be sent.</p> <p>If Mohave ground squirrels are detected during any project surveys, the project proponent shall provide the Kern County Planning and Community Development Department and the Bureau of Land Management with a map of all occupied habitat associated with the project. The project proponent shall also consult with the California Department of Fish and Game and the United States Fish and Wildlife Service regarding the potential for incidental take authorization.</p> <p>4. Pre-construction surveys for American badger will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Maternity dens shall be flagged for avoidance, identified on construction maps, and a Biological Monitor shall be present during construction. If avoidance of a non-maternity den is not feasible, the project proponent shall consult with the California Department of Fish and Game, Bureau of Land Management, the United States Fish and Wildlife Service and the Designated Biologist regarding relocation procedures.</p> <p>5. Pre-construction surveys for desert kit fox will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied kit fox dens shall be flagged and ground-disturbing activities avoided within 50 feet of</p> | <p>remains shall be collected, frozen as soon as possible, and California Department of Fish and Game and the United States Fish and Wildlife Service shall be contacted to determine where the remains will be sent.</p> <p>If Mohave ground squirrels are detected during any <u>pre-construction</u> project surveys/<u>sweeps</u>, the project proponent shall provide the Kern County Planning and Community Development Department and the Bureau of Land Management with a map of all occupied habitat associated with the project. The project proponent shall also consult with the California Department of Fish and Game and the United States Fish and Wildlife Service regarding the potential for incidental take authorization.</p> <p>4. Pre-construction surveys/<u>sweeps</u> for American badger will be conducted within suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Maternity dens shall be flagged for avoidance, identified on construction maps, and a Biological Monitor shall be present during construction. If avoidance of a non-maternity den is not feasible, the project proponent shall consult with the California Department of Fish and Game, Bureau of Land Management, the United States Fish and Wildlife Service and the Designated Biologist regarding relocation procedures.</p> <p>5. Pre-construction surveys/<u>sweeps</u> for desert kit fox will be conducted within</p> | |

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| | | <p>the occupied den avoided. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. If an occupied desert kit fox den is encountered, all work in the immediate vicinity shall stop until the California Department of Fish and Game, the United States Fish and Wildlife Service, and the Designated Biologist are consulted for the appropriate course of action.</p> <p>6. Surveys for roosting bats shall be conducted during the maternity season (March 1 to July 31) for any project area that is located within 300 feet of rocky outcrops or other habitat capable of supporting bat nursery colonies. These areas shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one (1) day and one (1) evening visit. If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed). If avoidance of the roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other methods approved by California Department of Fish and Game) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the California Department of Fish and Game, that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required. However, if there are no alternative roost sites used by the maternity colony, provision of substitute roosting bat habitat is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is</p> | <p>suitable habitat no more than 30 days prior to the start of construction activities. If present, occupied kit fox dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den avoided. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. If an occupied desert kit fox den is encountered, all work in the immediate vicinity shall stop until the California Department of Fish and Game, the United States Fish and Wildlife Service, and the Designated Biologist are consulted for the appropriate course of action.</p> <p>6. <u>Pre-construction project</u> Ssurveys/sweeps for roosting bats shall be conducted during the maternity season (March 1 to July 31) for any project area that is located within 300 feet of rocky outcrops or other habitat capable of supporting bat nursery colonies. These areas shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one (1) day and one (1) evening visit. If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed). If avoidance of the roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other methods approved by California Department of Fish and Game) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the California Department of Fish and Game, that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required. However,</p> | |

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| | | <p>present, then exclusion of bats prior to demolition of roosts is required.</p> <p>a. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use within one (1) mile of the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three (3) months prior to the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats' requirements in coordination with California Department of Fish and Game, the Bureau of Land Management, and Kern County Planning and Community Development Department. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The California Department of Fish and Game shall also be notified of any hibernacula or active nurseries within the construction zone.</p> <p>b. If non-breeding bat hibernacula are found in rocky outcrops scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, according to timing and under the direction of the qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one (1) week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost. This action should allow all bats to leave during the course of one (1) week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in</p> | <p>if there are no alternative roost sites used by the maternity colony, provision of substitute roosting bat habitat is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is present, then exclusion of bats prior to demolition of roosts is required.</p> | |

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| | | <p>the judgment of the qualified bat biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one (1) night between initial disturbance and the grading or tree removal).</p> <p>If an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July) using the exclusion techniques described above.</p> <p>7. Pre-construction surveys for burrowing owls shall be conducted in conformance with the California Department of Fish and Game's <i>Staff Report on Burrowing Owl Mitigation</i> (CDFG, 2012), within all suitable habitat within a 150-meter(492-foot) buffer zone of each work area, or as otherwise authorized by the California Department of Fish and Game. The project proponent shall submit the results of the pre-construction survey to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, the California Department of Fish and Game, and the United States Fish and Wildlife Service. The project proponent shall also submit evidence of conformance with federal and State regulations regarding the protection of the burrowing owl by demonstrating compliance with the following:</p> <p>a. Occupied burrows shall not be disturbed</p> | | |

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| | | <p>during the nesting season (February 1 through August 31); unless a qualified biologist approved by California Department of Fish and Game verifies through non-invasive methods that either the birds have not begun egg-laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Eviction outside the nesting season may be permitted pending evaluation of eviction plans (developed in accordance with California Department of Fish and Game protocol for burrowing owls) by California Department of Fish and Game and receipt of formal written approval from the California Department of Fish and Game authorizing the eviction.</p> <p>b. Any damaged or collapsed burrow will be replaced with artificial burrows in adjacent habitat.</p> <p>c. Unless otherwise authorized by California Department of Fish and Game, a 250-foot buffer, within which no activity will be permissible, will be maintained between project activities and nesting burrowing owls during the nesting season (February 1 through August 31). This protected area will remain in effect until August 31 or at California Department of Fish and Game's discretion and based upon monitoring evidence, until the young owls are foraging independently. A 160-foot disturbance-free buffer will be maintained around all occupied burrows during the non-breeding season (September 1 through January 31). Disturbance-free buffers may be modified based on site-specific conditions in consultation with the California Department of Fish and Game.</p> | <p>b. Any damaged or collapsed burrow <u>that shows evidence of use by burrowing owl</u> will be replaced with artificial burrows in adjacent habitat.</p> | <p>Modification to clarify intent of MM to cover burrowing owl burrows.</p> |

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| | | <p>d. If accidental take (disturbance, injury, or death of owls) occurs, the Designated Biologist will be notified immediately.</p> <p>e. Impacts to burrowing owl territories shall be mitigated through a combination of off-site habitat compensation and/or off-site restoration of disturbed habitat capable of supporting this species. The acquisition of occupied habitat off-site shall be in an area where turbines would not pose a mortality risk. Acquisition of habitat shall be consistent with the California Department of Fish and Game's <i>Staff Report on Burrowing Owl Mitigation</i> (CDFG, 2012). The preserved habitat shall be occupied by burrowing owl and shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified ornithologist. The site shall be approved by the California Department of Fish and Game. Land shall be purchased and/or placed in a conservation easement in perpetuity and managed to maintain suitable habitat. The offsite area to be preserved can coincide with off-site mitigation lands for permanent impacts to sensitive vegetation communities, with the approval of the Bureau of Land Management and the California Department of Fish and Game.</p> <p>8. Prior to the issuance of grading or building permits by the County and/or a Notice to Proceed from the BLM, the project proponent shall submit written documentation to the Kern County Planning and Community Development Department and to the Bureau of Land Management demonstrating how the following desert</p> | | |

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| | | <p>tortoise mitigation will be implemented during construction activities:</p> <p>a. Temporary tortoise-proof fencing shall be erected and maintained between the project construction areas and suitable desert tortoise habitat before initiating clearance surveys for desert tortoise and construction on the project site. Installation of fencing will be monitored by a Biological Monitor. Fencing shall be maintained with oversight from a Biological Monitor and/or the Designated Biologist.</p> <p>b. Continuous weekly verification by a Biological Monitor shall occur to ensure that a tortoise has not been trapped within the fence and the fence remains intact.</p> <p>c. Two desert tortoise clearance surveys shall be conducted immediately after constructing the tortoise-proof fence. The surveys shall cover 100 percent of the exclusion area.</p> <p>d. Trash receptacles at the work site will have self-locking lids to prevent entry by opportunistic predators such as common ravens and coyotes.</p> <p>e. Whenever a vehicle or any construction equipment is parked longer than 15 minutes within desert tortoise habitat, the ground around and underneath the vehicle will be inspected for desert tortoises prior to moving the vehicle. If a desert tortoise is observed, a Biological Monitor shall be contacted. The tortoise shall be left to move on its own. Tortoises shall not be handled unless otherwise authorized by the Biological Opinion and 2081 take authorization.</p> <p>f. A Biological Monitor shall be on site to survey for tortoises immediately in front of vegetation clearance activities including, but</p> | <p>b. Continuous weekly verification <u>bi-weekly inspections</u> by a Biological Monitor shall occur <u>throughout construction</u> to ensure that a tortoise has not been trapped within the fence and the fence remains intact.</p> <p>c. Two desert tortoise clearance surveys shall be conducted immediately after constructing the tortoise-proof fence. The surveys shall cover 100 percent of the exclusion area, <u>unless directed otherwise in the Biological Opinion.</u></p> | <p>Modification to make consistent with typical inspection requirements for Biological Monitors and to acknowledge survey requirements in the biological opinion may be different.</p> |

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| | | <p>not limited to, construction sites, staging areas, and access routes in the event a tortoise was inadvertently missed during clearance surveys.</p> <p>g. Potential desert tortoise burrows found in the construction zone, whether occupied or not, shall be avoided by realignment of the construction path. If realignment is not feasible, then the United States Fish and Wildlife Service and the California Department of Fish and game shall be consulted to determine whether burrow excavation is feasible, and to obtain authorization for excavation and relocation of tortoise(s) and/or egg(s), if applicable. Desert tortoise burrows and pallets that fall outside of, but within 50 feet of, the construction work area shall be flagged for avoidance.</p> <p>h. Construction pipe, culvert, or similar structures with a diameter greater than three (3) inches and stored less than eight (8) inches above ground on the construction site for one or more nights shall be inspected for tortoises and other special-status wildlife before the material is moved, buried, or capped. As an alternative, structures may be capped before being stored on the construction site.</p> <p>i. Open trenches shall be fenced with temporary tortoise-proof fencing or inspected by authorized personnel periodically, at the beginning and at the end of each day, and immediately before backfilling. Any tortoise that is found in a trench shall be promptly removed by authorized personnel in accordance with the Biological Opinion. If the biologist is not allowed to enter the trench for safety reasons, the United States Fish and Wildlife</p> | | |

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| | | <p>Service will be contacted immediately for authorization to proceed with alternative methods.</p> <p>j. Within 90 days of completion of project activities, the Designated Biologist shall submit a report to the Bureau of Land Management's Authorized Officer, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game documenting the numbers and locations of desert tortoises encountered, their disposition, effectiveness of protective measures, practicality of protective measures, and recommendations for future measures that allow for better protection or more workable implementation.</p> <p>k. The Designated Biologist shall notify the Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game within 24 hours upon locating a dead or injured desert tortoise during the construction phase of the project. The notification shall be made by telephone and in writing to the Bureau of Land Management's Authorized Officer, United States Fish and Wildlife Service, California Department of Fish and Game, and Kern County Planning and Community Development Department. The report shall include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Tortoises fatally injured during project-related activities shall be submitted for necropsy.</p> | | |

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| | | <p>l. The Designated Biologist and/or Biological Monitor shall be present during maintenance outside the established tortoise exclusion areas to assist in the implementation of protection measures for the desert tortoise and to monitor compliance.</p> <p>m. If any operation and maintenance activity must be conducted during the desert tortoise active period (March 15 to May 31 and September 1 to October 31) that may result in ground disturbance, such as weed management or vehicular access off of a designated access/maintenance road, a Biological Monitor shall be present during such activity to ensure that no desert tortoise mortality results.</p> | <p>m. If any operation and maintenance activity <u>during construction</u> must be conducted during the desert tortoise active period (March 15 to May 31 and September 1 to October 31) that may result in ground disturbance, such as weed management or vehicular access off of a designated access/maintenance road, a Biological Monitor shall be present during such activity to ensure that no desert tortoise mortality results.</p> | <p>m) This MM requires documentation demonstrating how the desert tortoise mitigation will be implemented during construction activities; therefore, revised to allow for compliance during construction.</p> |
| 4.21.11 | 4.21-51 | <p>MM 4.21-4 Raven Management Plan. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, a <i>Raven Management Plan</i> shall be developed for the project site in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Implementation of the Raven Management Plan only applies to areas that are desert tortoise habitat. The Raven Management Plan will require measures such as annual nest removal by a qualified biologist in consultation with the California Department of Fish and Game and the United States Fish and Wildlife Service, removal of carrion at the base of wind turbine generators, storage of garbage in raven-proof containers, and installation of anti-nesting devices on structures where raven nests could be built. In addition, to offset the cumulative contributions of the project to desert tortoise from increased raven</p> | <p>MM 4.21-4 Raven Management Plan. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, a <i>Raven Management Plan</i> shall be developed for the project site in consultation with the United States Fish and Wildlife Service and California Department of Fish and Game. Implementation of the Raven Management Plan only applies to areas that are desert tortoise habitat. The Raven Management Plan will require measures such as annual nest removal by a qualified biologist in consultation with the California Department of Fish and Game and the United States Fish and Wildlife Service, removal of carrion at the base of wind turbine generators, storage of garbage in raven-proof containers, and installation of anti-nesting devices on structures where raven nests could be built. In addition, to offset the cumulative contributions of the project to desert</p> | <p>Revised to reflect correct number.</p> |

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| | | numbers, the project proponent shall also contribute to the United States Fish and Wildlife Service Regional Common Raven Management Program through the payment of fees not to exceed \$150 per disturbed acre. This number shall be verified utilizing the formula established by the Desert Managers Group. | tortoise from increased raven numbers, the project proponent shall also contribute to the United States Fish and Wildlife Service Regional Common Raven Management Program through the payment of fees not to exceed \$150 <u>\$105</u> per disturbed acre. This number shall be verified utilizing the formula established by the Desert Managers Group. | |
| 4.21.11 | 4.21-52 | <p>MM 4.21-5 California Condor. Prior to the issuance of grading or building permits by Kern County and/or a Notice to Proceed by the BLM, the project proponent shall submit written documentation to the Bureau of Land Management's Authorized Officer, the Kern County Planning and Community Development Department, California Department of Fish and Game, and the United States Fish and Wildlife Services of the following regarding the California condor:</p> <ol style="list-style-type: none"> 1. A qualified biologist with demonstrated knowledge of California condor identification will be on site to monitor all construction activities within the project area and assist the project proponent in the implementation of the monitoring program. 2. Workers will be trained on the issue of microtrash and its potential effects to California condors. In addition, daily sweeps of the work area will occur to collect and remove trash. All spills of ethylene glycol will be cleaned up immediately and a report documenting the actions taken to remediate the spill will be provided to Bureau of Land Management, Kern County Planning and Community Development Department, United States Fish and Wildlife Service, and California Department of Fish and Game | | |

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| | | <p>within five (5) calendar days of the incident.</p> <p>3. As part of the Worker Education Awareness Program, the project proponent shall develop a flier that will be distributed to all workers on the project concerning information on the California condor. Information to be included consists of the following: species description with photos and/or drawings indicating how to identify the California condor and how to distinguish condors from turkey vultures and golden eagles; protective status and penalties for violation of the federal and California Endangered Species Acts; avoidance measures being implemented on the project; and contact information for communicating condor sightings. A copy of the flier shall be submitted to the Bureau of Land Management's Authorized Officer and Kern County Planning and Community Development Department to demonstrate compliance with this mitigation.</p> <p>4. All California condor sightings in the project area during construction will be reported directly to the United States Fish and Wildlife Service, California Department of Fish and Game, Bureau of Land Management, and Kern County within 24 hours.</p> <p>5. The project proponent shall provide written documentation to the Kern County Planning and Community Development Department and the Bureau of Land Management showing implementation of the following additional measures:</p> <p>a. Bird flight diverters shall be installed on all temporary meteorological tower guy wires constructed as part of the project. All permanent meteorological towers shall be free-standing and not contain guy wires.</p> | <p>a. Bird flight diverters shall be installed on all temporary meteorological tower guy wires constructed as part of the project. All permanent meteorological towers shall be free-standing and not contain guy wires. All meteorological towers shall be un-guyed,</p> | <p>Applicant proposes suggested revision to be consistent with other Kern County environmental documents.</p> |

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| | | <p>b. During periods of livestock grazing, a full-time monitor shall be present to ensure immediate removal of carcasses on the project site. These practices shall include a full-time monitor during periods of livestock grazing that will be present to ensure immediate removal of carcasses from the project site to an off-site location far enough from wind developments so as not to present a risk to condors foraging on the carcasses. The monitor shall also assist in designating an area for burial of carcasses or, alternatively, assist the rancher in removing the carcasses to the nearest County landfill site that accepts dead livestock. The project proponent shall also ensure that the monitor is verifying that all watering troughs are inaccessible to wildlife (covered, empty, etc.) during periods when grazing is not occurring.</p> <p>c. The applicant shall work together with the area grazing permittees to develop Best Management Practices to minimize attraction of condors to the project area</p> <p>d. Funding for conservation measures such as radio telemetry, condor feeding programs, or other such measures as deemed appropriate shall be provided to the California Condor Recovery Program. Funding shall be calculated at six (6) units per one hundred (100) turbines installed as part of the project. Prior to the issuance of any building or grading permits for the first (1st) turbine, the project proponent shall fund six telemetry units in the amount of \$188,100 (\$4,150 per unit plus an "endowment" of \$163,200 to be used for tracking data over an eight-year period). Prior to the issuance of any building or grading permits for the one-hundred-and-first (101st) turbine, the project proponent</p> | <p><u>unless evidence is provided that topography, safety, access and/or climate conditions prohibit free standing towers. If guy wires are necessary, bird deterrents shall be used. Temporary MET towers shall only be permitted for three years. A maximum of two Wind Resource Reference Towers may be permitted permanently with guy wires and bird diverters.</u></p> <p>b. During periods of livestock grazing, a full-time monitor shall be present to ensure immediate removal of carcasses on the project site. These practices shall include a full-time monitor during periods of livestock grazing that will be present to ensure immediate removal <u>or on-site burial</u> of carcasses. from the project site to an off-site location far enough from wind developments so as not to present a risk to condors foraging on the carcasses. The monitor shall also assist in designating an area for burial of carcasses or, alternatively, assist the rancher in removing the carcasses to the nearest County landfill site that accepts dead livestock. The project proponent shall also ensure that the monitor is verifying that all watering troughs are inaccessible to wildlife (covered, empty, etc.) during periods when grazing is not occurring.</p> <p>d. Funding for conservation measures such as radio telemetry, condor feeding programs, or other such measures as deemed appropriate shall be provided to the California Condor Recovery Program. Funding shall be calculated at six (6) units per one hundred (100) turbines installed as part of the project. Prior to the issuance of any building or grading permits for the first</p> | <p>Onsite burial is sufficient to dispose of carcass.</p> |

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| | | shall fund six additional telemetry units in the amount of \$188,100 (\$4,150 per unit plus an endowment of \$163,200 to be used for tracking data over an eight year period). The total funding to be provided shall not exceed \$376,200. | (1st) turbine, the project proponent shall fund six telemetry units in the amount of \$188,100 (\$4,150 per unit plus an "endowment" of \$163,200 to be used for tracking data over an eight-year period). Prior to the issuance of any building or grading permits for the one-hundred-and-first (101st) turbine, the project proponent shall fund six additional telemetry units in the amount of \$188,100 (\$4,150 per unit plus an endowment of \$163,200 to be used for tracking data over an eight year period). The total funding to be provided shall not exceed \$376,200 <u>or funding requirements in the Biological Opinion, whichever is greater.</u> | |
| 4.21.11 | 4.21-55 | <p>MM 4.21-10 Post-Construction Breeding Monitoring. Once the project is operational, the project proponent shall conduct Post-Construction Breeding Monitoring in the first, second, and third years following the initial operation of the project. Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. The purpose of this monitoring would be to demonstrate whether sensitive resident birds are compatible with operation of wind turbine generators, and to show that the level of incidental injury and mortality does not result in a long-term decline in sensitive resident bird species in the region. Post-construction Breeding Monitoring shall include a Nesting Analysis that shall be conducted as follows:</p> <p>1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the</p> | <p>MM 4.21-10 Post-Construction Breeding Monitoring. Once the project is operational, the project proponent shall conduct Post-Construction Breeding Monitoring in the first, second, and third years following the initial operation of the project. Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. The purpose of this monitoring would be to demonstrate whether sensitive resident birds are compatible with operation of wind turbine generators, and to show that the level of incidental injury and mortality does not result in a long-term decline in sensitive resident bird species in the region. Post-construction Breeding Monitoring shall include a Nesting Analysis that shall be conducted as follows:</p> | Text modified to reflect typical monitoring program. |

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| | | <p>results of a study and comparative data analysis. A qualified ornithologist shall conduct the study of nesting raptors.</p> <p>2. Nesting raptor surveys shall be conducted throughout the project site between February 15 and August 15.</p> <p>3. Directed field surveys for nesting raptors shall be conducted during the breeding season by vehicle and on foot to determine the presence or absence of raptor nests, especially mid-sized to large raptor nests within suitable habitat areas.</p> <p>4. If at the end of the second round of monitoring (three years following the initial operation of the project), the operation of wind turbine generators has been determined to result in a level of incidental injury and mortality to nesting birds that constitutes a significant adverse impact on a breeding population, the project proponent shall undertake supplemental compensatory measures to support regional conservation of migratory birds.</p> <p>5. The results of the Nesting Analysis shall be made available to regional entities involved in research related to the conservation of nesting birds such as the Audubon Society.</p> | | |
| 4.21.11 | 4.21-56 | <p>MM 4.21-11 Post-Construction Avian and Bat Mortality Monitoring. Once the project is operational, the project proponent shall perform Post-Construction Avian and Bat Mortality Monitoring in the first, second, and third years following the initial operation of the project to demonstrate the level of incidental injury and mortality to populations of avian or bat species in the vicinity of the project site. Additional years of monitoring may be required by an appropriate Agency</p> | <p>MM 4.21-11 Post-Construction Avian and Bat Mortality Monitoring. Once the project is operational, the project proponent shall perform Post-Construction Avian and Bat Mortality Monitoring in the first, second, <u>and third, and fifth</u> years following the initial operation of the project to demonstrate the level of incidental injury and mortality <u>does not result in an unanticipated long-term decline in the</u> populations of avian or bat species in the vicinity of the project site.</p> | Text modified to reflect typical monitoring program. |

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| | | <p>such as the United States Fish & Wildlife Service. Post-Construction Avian and Bat Mortality Monitoring shall include a Mortality Analysis, which shall be conducted as follows:</p> <ol style="list-style-type: none"> 1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the results of the mortality monitoring for avian and bat species on an annual basis. A qualified wildlife biologist shall conduct mortality monitoring using a statistically significant sample size of operational turbines within the wind energy development project. 2. The Mortality Monitoring Analysis shall note species number, location, and distance from the turbine for each recovered bird or bat, availability of bird and bat prey species, and apparent cause of avian or bat mortality. The project proponent shall provide all results to the Wildlife Response and Reporting System database within 90 days of completion of the annual study. 3. The Mortality Monitoring shall follow standardized guidelines outlined by the California Energy Commission and California Department of Fish and Game (CEC and CDFG, 2007) and the United States Fish and Wildlife Service (USFWS, 2010b) or more current guidance from the United States Fish and Wildlife Service, and shall include carcass scavenging and searcher efficiency trials. 4. At a minimum, the Mortality Monitoring Analysis shall consider four factors: <ol style="list-style-type: none"> a. Number of annual avian and bat mortalities per turbine, | <p>Additional years of monitoring may be required by an appropriate Agency such as the United States Fish & Wildlife Service. Post-Construction Avian and Bat Mortality Monitoring shall include a Mortality Analysis, which shall be conducted as follows:</p> <ol style="list-style-type: none"> 1. The project proponent shall provide to the Kern County Planning and Community Development Department, the Bureau of Land Management, the California Department of Fish and Game, and the United States Fish and Wildlife Service the results of the mortality monitoring for avian and bat species on an annual basis. A qualified wildlife biologist shall conduct <u>supervise</u> mortality monitoring using a statistically significant sample size of operational turbines within the wind energy development project. 2. The Mortality Monitoring Analysis shall note species number, location, and distance from the turbine for each recovered bird or bat, availability of bird and bat prey species, and apparent cause of avian or bat mortality. The project proponent shall provide all results to the Wildlife Response and Reporting System database within 90 days of completion of the annual study. 3. The Mortality Monitoring shall follow standardized guidelines outlined by the California Energy Commission and California Department of Fish and Game (CEC and CDFG, 2007) and the United States Fish and Wildlife Service (USFWS, 2010b) or more current guidance from the United States Fish and Wildlife Service, and shall include carcass scavenging and searcher efficiency | |

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| | | <p>b. Disproportionate representation of a particular species, and</p> <p>c. Comparison to existing data on wind farm mortality.</p> <p>d. Comparison to existing data on wind farm mortality from the Tehachapi Wind Resource area and the western United States.</p> <p>5. In addition to Mortality Monitoring described above, starting in year 1 of project operation and continuing for the life of the project, annual Post-Construction Mortality Monitoring for golden eagle shall be conducted by the project proponent, in conjunction with other monitoring, and submitted to the Kern County Planning and Community Development Department, the Bureau of Land Management, the United States Fish and Wildlife Service, and the California Department of Fish and Game.</p> | <p>trials.</p> <p>4. At a minimum, the Mortality Monitoring Analysis shall consider four factors:</p> <p>a. Number of annual avian and bat mortalities per turbine,</p> <p>b. Disproportionate representation of a particular species, and</p> <p>c. Comparison to existing data on wind farm mortality <u>from the Tehachapi Wind Resource Area and the western United States.</u></p> <p>d. Comparison to existing data on wind farm mortality from the Tehachapi Wind Resource area and the western United States.</p> <p>5. In addition to Mortality Monitoring described above, starting in year 1 of project operation and continuing for the life of the project, annual Post-Construction Mortality Monitoring for golden eagle shall be conducted by the project proponent, in conjunction with other monitoring, and submitted to the Kern County Planning and Community Development Department, the Bureau of Land Management, the United States Fish and Wildlife Service, and the California Department of Fish and Game.</p> | |
| 4.21.11 | 4.21-57 | <p>MM 4.21-13 Avian Power Line Interaction Committee Standards. Prior to issuance of approval for final occupancy by Kern County, the project proponent shall submit written documentation to the Bureau of Land Management and Kern County Planning and Community Development Department demonstrating that all power lines are engineered and constructed to the most current Avian Power Line Interaction</p> | <p>MM 4.21-13 Avian Power Line Interaction Committee Standards. Prior to issuance of approval for final occupancy by Kern County, the project proponent shall submit written documentation to the Bureau of Land Management and Kern County Planning and Community Development Department demonstrating that all power lines are engineered and constructed to the most current Avian Power Line Interaction</p> | Text modified to reflect standards. |

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|---------|---------|--|---|---|
| | | Committee standards, at the time of construction. The project proponent shall conform to the latest practices to protect birds from electrocution and collision on the transmission line. | Committee standards <u>(at the time power lines are designed)</u> , at the time of construction. The project proponent shall conform to the latest practices <u>(as outlined in the 2006 Avian Power Line Interaction Committee standards)</u> to protect birds from electrocution and collision on the transmission line. | |
| 4.21.11 | 4.21-57 | <p>MM 4.21-14 Post-Construction Condor Monitoring. Condor observations made within the project area and identified buffer must be reported to Kern County, BLM, USFWS, and CDFG within 24 hours of the observation. Behavior of the birds, meteorological conditions at the time, and any subsequent curtailment must be reported. Additionally, all such individual reports shall also be provided in quarterly reports on condor activity to the BLM and Kern County Planning and Community Development Department for the term of the grant. The reports shall include all condor sightings, conditions at the time condors are within the project area (e.g. time, duration, temperature, wind speed, and direction), curtailments, duration of curtailments, and number of turbines affected. In the event of take (including harassment or harm) of California condor beyond the habitat removal authorized in the project's Biological Opinion, the project proponent shall:</p> <p>1) Within 24 hours, the holder shall notify the BLM authorized officer, the USFWS, and the Kern County Planning and Development Department.</p> <p>2) If take in the form of harassment occurs, all turbines shall be restricted to nighttime operations only, curtailing daylight</p> | <p>MM 4.21-14 Post-Construction Condor Monitoring. Condor observations made within the project area and identified buffer must be reported to Kern County, BLM, USFWS, and CDFG within 24 hours of the observation. Behavior of the birds, meteorological conditions at the time, and any subsequent curtailment must be reported. Additionally, all such individual reports shall also be provided in quarterly reports on condor activity to the BLM and Kern County Planning and Community Development Department for the term of the grant. The reports shall include all condor sightings, conditions at the time condors are within the project area (e.g. time, duration, temperature, wind speed, and direction), curtailments, duration of curtailments, and number of turbines affected. In the event of take (including harassment or harm) of California condor beyond the habitat removal authorized in the project's Biological Opinion, the project proponent shall:</p> <p>1) Within 24 hours, the holder shall notify the BLM authorized officer, the USFWS, and the Kern County Planning and Development Department.</p> <p>2) If take in the form of harassment occurs, all turbines shall be restricted to nighttime</p> | Applicant requests inclusion of suggested text. |

Table 2
Alta East Draft Environmental Impact Statement/Report Errata

| Section | Page | DEIS/DEIR Text | Proposed Changes to Text | Discussion |
|---------|------|---|---|------------|
| | | <p>operations for two weeks.</p> <p>3) Continuous daylight observations shall be made for the two-week curtailment period.</p> <p>4) After the two-week period, the project proponent shall provide reports (including condor observations and meteorological conditions) to the BLM, USFWS, and Kern County Planning and Development Department.</p> <p>5) The BLM and the USFWS and CDFG shall determine if conditions of increased risk to condors continue to exist, and therefore nighttime-only operations should continue, or if the conditions have changed such that risk to condors is again low and daylight operations may resume.</p> <p>6) Steps 3, 4, and 5 will continue until such time that daylight operations have been allowed to resume.</p> <p>In the event of a condor mortality the applicant shall:</p> <p>1) Immediately cease all turbine operations.</p> <p>2) Notify the BLM authorized officer, USFWS, CDFG, and the Kern County Planning and Community Development Department.</p> <p>3) In preparation for reinitiation of formal Endangered Species Act consultation for the project, submit a plan for review and approval to the BLM, the USFWS, and CDFG along with the Kern County Planning and Development Department for developing and implementing additional specific condor avoidance and minimization measures including, but not limited to, radar and telemetry curtailment measures. Turbine operations shall not resume until reinitiated Section 7 consultation is complete and a</p> | <p>operations only, curtailing daylight operations for two weeks.</p> <p>3) Continuous daylight observations shall be made for the two-week curtailment period.</p> <p>4) After the two-week period, the project proponent shall provide reports (including condor observations and meteorological conditions) to the BLM, USFWS, and Kern County Planning and Development Department.</p> <p>5) The BLM and the USFWS and CDFG shall determine if conditions of increased risk to condors continue to exist, and therefore nighttime-only operations should continue, or if the conditions have changed such that risk to condors is again low and daylight operations may resume.</p> <p>6) Steps 3, 4, and 5 will continue until such time that daylight operations have been allowed to resume.</p> <p>In the event of a condor mortality the applicant shall:</p> <p>1) Immediately cease all turbine operations.</p> <p>2) Notify the BLM authorized officer, USFWS, CDFG, and the Kern County Planning and Community Development Department.</p> <p>3) In preparation for reinitiation of formal Endangered Species Act consultation for the project, submit a plan for review and approval to the BLM, the USFWS, and CDFG along with the Kern County Planning and Development Department for developing and implementing additional specific condor avoidance and minimization measures including, but not limited to, radar and telemetry curtailment measures. Turbine operations shall not resume until reinitiated</p> | |

Table 2
Alta East Draft Environmental Impact Statement/Report Errata

| Section | Page | DEIS/DEIR Text | Proposed Changes to Text | Discussion |
|---------|---------|---|--|--|
| | | revised project Biological Opinion is issued. | Section 7 consultation is complete and a revised project Biological Opinion is issued. <u>Or, in lieu of all of the above measures, the Applicant shall adhere to the take provisions through procedures identified in the USFWS Biological Opinion.</u> | |
| 4.21.12 | 4.21-59 | <p>With the implementation of Mitigation Measures 4.21-1 through 4.21-13, 4.17-1 and 4.17-5, 4.2-1, 4.2-3, 4.18-1, and 4.18-4, the residual impacts to wildlife resources would be:</p> <ol style="list-style-type: none"> 1. The net loss of habitat on the project site for the duration of AEWP O&M and for some period after ultimate site restoration after decommissioning; 2. The fragmentation and impaired connectivity of wildlife habitat in the upper Chuckwalla Valley over the life of the AEWP; 3. The effects of noise, lighting, dust, and other disturbances to adjacent offsite habitat during construction, O&M, and decommissioning; 4. The effects to displaced wildlife (finding and establishing new home ranges, intra- and/or interspecific competition for food and other resources, etc.); and 5. The potential, but unquantified loss of birds during AEWP O&M. | <p>With the implementation of Mitigation Measures 4.21-1 through 4.21-13, 4.17-1 and 4.17-5, 4.2-1, 4.2-3, 4.18-1, and 4.18-4, the residual impacts to wildlife resources would be:</p> <ol style="list-style-type: none"> 1. The net loss of habitat on the project site for the duration of AEWP O&M and for some period after ultimate site restoration after decommissioning; 2. The fragmentation and impaired connectivity of wildlife habitat in the upper Chuckwalla Valley over the life of the AEWP; 3. The effects of noise, lighting, dust, and other disturbances to adjacent offsite habitat during construction, O&M, and decommissioning; 4. The effects to displaced wildlife (finding and establishing new home ranges, intra- and/or interspecific competition for food and other resources, etc.); and 5. The potential, but unquantified loss of birds during AEWP O&M. | Please delete Chuckwalla reference because it is not relevant to this project. |



Draft for Discussion Only

September 26, 2012

Mr. David Nielsen
Alta Windpower Development, LLC
11682 El Camino Real, Suite 320
San Diego, CA 92130

RE: Alternative WTG Selection

Mr. Nielsen:

As requested WZI has reviewed the alternative WTGs that you have identified as candidate WTGs for the Alta East project for which we supplied a noise assessment dated May, 2011. The listed alternative engines are in the below table:

| Turbine | Hub Height | Rotor Diameter |
|----------------|-------------------|-----------------------|
| Vesta V-112 | 84m | 112m |
| Siemens 2.3 MW | 80m | 108m |
| Siemens 3.0MW | 80m | 108m |
| GE 1.85MW | 80m | 82.5m |
| GE 2.85MW | 85m | 103m |
| GE 1.72MW | 80m | 100m |
| GE 1.62 MW | 80m | 100m |

For its original noise assessment, WZI used the representative Vestas V90 data and the proposed design locations for WTG centerlines. WZI understands that WTG locations were based on the preliminary sites selected based on the general turbine manufacturers requirements. The original project description specified the basis for the noise analysis;

Turbine locations were modeled based on the preliminary sites selected based on the general turbine manufacturers requirements. Depending upon WTG manufacturer(s) and model(s) chosen, the WTGs will be approximately 80 to 152 meters (265 to 500 feet) in total height, measured from the top of the foundation to blade tip with a blade in the vertical position, and the power output of the individual WTGs will be 3 MW (Nom.). The modeling analysis used profile data for the Vestas 3.0 MW unit; all power and noise outputs are nominal and vary by wind speed.

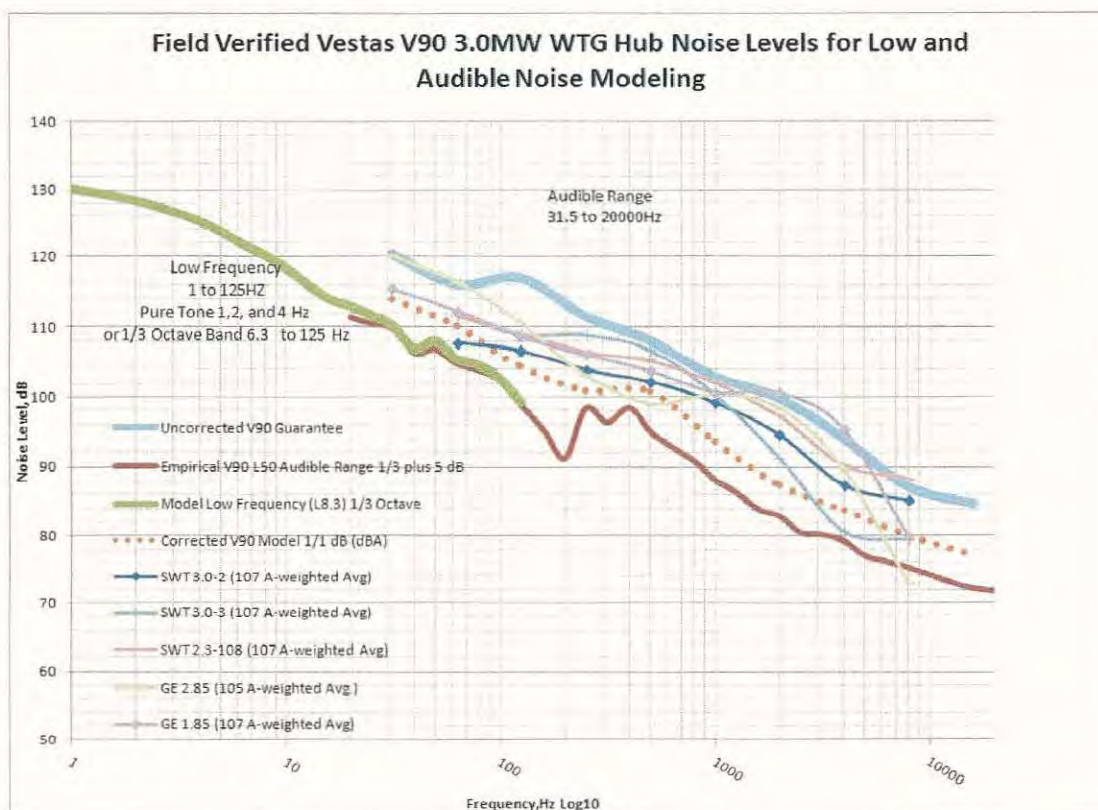
The modeling analysis used profile data for the 3.0 MW (Nom.) Vestas V90 unit; all power and noise outputs are nominal and vary by wind speed, up to the cut out speed, we selected the maximum noise generating hub wind speed for the maximum hub noise and used varying wind conditions at 10m for impacts. As part of our overall assessment, we investigated WTGs as large as 5MW and found that the basic modern WTG design is similar between units with minor modifications related to rotor diameter, airfoil and blade positioning. Noise levels generated by various WTGs setting on typical banks of multiple units are relatively similar. Larger units with greater rotor diameter require additional spacing between the units in any specific cluster, while the smaller units with smaller diameter can be set slightly closer.

Our analysis of empirical data (used to calibrate the finite element noise model to the 3MW Vesta which had a manufacturer guaranteed not to exceed hub noise level of 108 dB(A)) showed that the manufacturer value carried design margins requiring an adjustment to the noise spectrum to achieve a far-field modeling result that tied to the empirical data gathered at various test locations near a single test unit under varying wind conditions.

In this instance the additional WTG models that you propose for consideration and installation are similar or slightly smaller than the typical 3.0 MW (Nom.) WTG used in the design-based analysis. As far as the low frequency noise impacts are concerned, the same correction study previously mentioned developed a low frequency curve for the 3.0 MW three bladed, upwind airfoil design.

Conservatively, low frequency $L_{8,3}$ data were sorted for the range of operation of the WTGs to ensure only WTG noise was being used and there was no low wind speed bias (i.e., 3 m/s and greater). $L_{8,3}$ data were selected since will return higher values as opposed to L_{eq} . The results were then extrapolated from 6.3 Hz to 1 Hz using a polynomial curve fit from 31.5 Hz. These far-field values were then used to back-calculate the Sound Pressure Level at the Hub accounting for radiative effect, air attenuation and the wind effect.

Below please find a plot of the alternative engine manufacturer data on a figure with the calibrated model data. The Vestas 112 unit is not plotted; the manufacturer only supplied the A-weighted average in the data sheet. However, we have concluded that the impacts related to the Vestas 112 will not have different impacts since the manufacturer's A-weighted value (106.5 dB(A)) is below the modeled V90's manufacturer's value (108 dB(A)).



As you can see the plotted spectral audible range data are very similar to the original data that was verified with empirical L_{50} noise data from various locations temporally correlated to the wind conditions (speed and direction). The data at the low frequency range (125 Hz down to 16Hz) was used to correct other low frequency trended data as discussed in the Noise Assessments Attachment 5, "Modeling Corrections Based on Field Data." The WTG manufacturer values are consistently below the blue line which is the original Vesta WTG data (108 dB(A) case- Lin profile in 1/1 Octave bands) that was adjusted using field verified data (red line). These data were used in the finite element test model as a noise source (dotted line) which resulted in correlation with the field data. These data were then used to ensure accurate modeling of actual impacts for the EIR. This implies that any correction would result in source noise levels that are lower than those in the original model (used in the Noise Assessment) which was field verified. Because each of the proposed alternative noise profiles are below the original design model and because the units will be properly spaced in the original cluster arrangements along selected ridgelines so as to conform to any manufacturer blade-diameter-based spacing requirements, we have no reason to believe that additional modeling will alter the results in WZI's Noise Assessment, including Supplemental Analyses for the Alta East Study Area.

If you have any questions, please do not hesitate to contact me at (661) 326-1112.

Very Truly Yours

[Handwritten Signature]
Jesse D. Frederick
Vice President



NATURAL RESOURCES ♦ SCIENTIFIC SOLUTIONS

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TECHNICAL MEMORANDUM

Golden Eagle Fatality Predictions for the Proposed Alta East Wind Resource Area Kern County, California

Submitted by:
Western EcoSystems Technology, Inc.

May 25, 2012

INTRODUCTION

From May 11, 2009 through June 1, 2011 Western EcoSystems Technology, Inc. (WEST) conducted baseline avian studies at the proposed Alta East Wind Resource Area (AEWRA) in Kern County, California. These surveys were designed to document avian use patterns, identify potential risk issues, and assist with siting turbines to minimize impacts to avian resources. Because use of the AEWRA and adjacent areas by golden eagles (*Aquila chrysaetos*) was documented, and golden eagle nests were located in the surrounding landscape, the proposed project's potential impacts to eagles are important to understand in regard to developing a defensible risk characterization, which may (or may not) lead to an Eagle Conservation Plan and application for a programmatic take permit. The purpose of this document is to utilize the two years of site-specific baseline avian use data to provide golden eagle fatality predictions for the AEWRA. The results of these analyses indicate that the proposed wind energy facility at the AEWRA would potentially take eagles at a rate of less than one per year. This memorandum summarizes the golden eagle fatality prediction approaches and results for two models of wind turbine generators (WTGs) with potential to be used at the site: Vestas V90-3.0 megawatt (MW) and Nordex N117 2.4 MW WTGs which would generate up to 254.4 MW.

STUDY AREA

The proposed AEWRA is located in southeastern Kern County, approximately two miles (3.2 kilometers [km]) north-northwest of the unincorporated city of Mojave, and 10 miles (16 km) east of the city of Tehachapi. The study area comprises undeveloped rangeland on a combination of privately-owned land and land administered by the Bureau of Land Management.

The AEWRA falls within the high desert plains and hills on the western edge of the Mojave Desert. The Tehachapi Mountains are located to the north and west of the study area and transition into Mojave Desert towards the south and east. Elevations within the study area range from approximately 3,100 to 4,200 feet (ft; 940 to 1,280 meters [m]) above sea level, with the highest elevations occurring in the northern portion of the study area (Figure 1). The habitat ranges from lowland creosote (*Larrea tridentata*) scrub and Joshua tree (*Yucca brevifolia*) woodland in the southeast to juniper (*Juniperus* spp.) shrubland on the steeper, rocky slopes in the north. Water within the AEWRA is limited to a network of ephemeral drainages; there are no perennial surface water sources within the study area. Highway 58 bisects the AEWRA, an underground portion of the Los Angeles Aqueduct runs along the southeast corner of the study area, and a network of dirt roads and off-highway vehicle (OHV) trails run throughout the study area (Figure 1).

The project will consist of up to 106 WTGs and ancillary facilities. Two possible types of WTGs are planned for the AEWRA: Vestas V90-3.0 MW WTGs which would provide a total project nameplate capacity of 318 MWs, or Nordex N117 2.4 MW WTGs which would generate up to 254.4 MW. The Vestas WTGs have a wind-swept rotor diameter of 295 feet (90 m). The highest point of the rotor blade rotation is 410 feet (125 m) and the ground clearance for the rotor blades at their lowest point of rotation is 115 feet (35 m). The Nordex 2.4 MW WTGs have a rotor diameter of 384 feet (117 m). The highest point of the rotor blade rotation is approximately 492 ft (150 m), and the ground clearance for the rotor blades is 108 ft (33 m). Although the Nordex has a larger rotor swept area and extends higher in the air than the Vestas, it has a lower maximum velocity (blade tip speed) and generates less power on a per turbine basis, resulting in reduced overall project output than the same number of Vestas 3.0 MW WTGs.

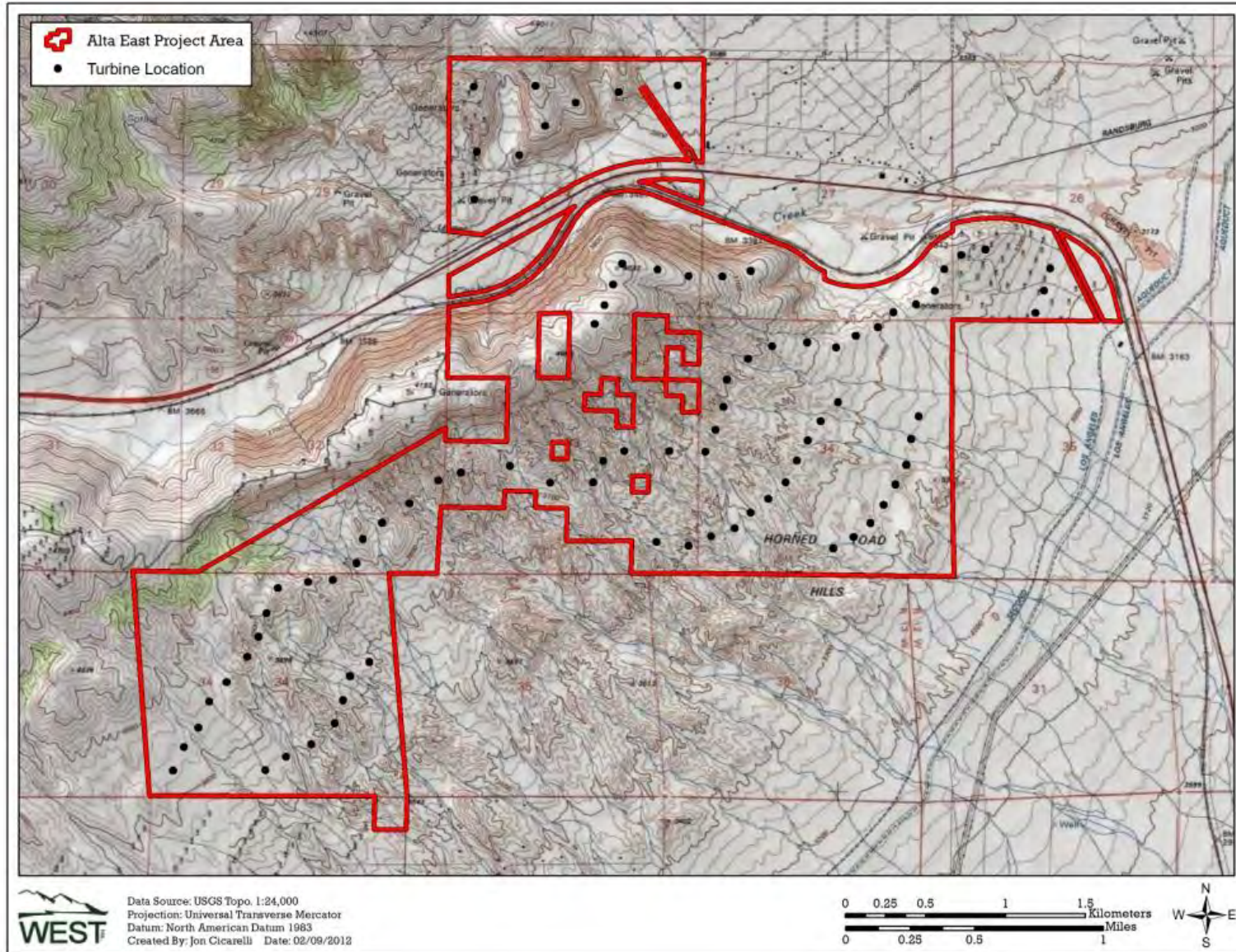


Figure 1. Map of the Alta East Wind Resource Area showing proposed turbine layout.

SITE-SPECIFIC AVIAN USE SURVEYS

This golden eagle risk assessment is based on golden eagle observational data collected over two years of fixed-point avian use surveys conducted at the AEWRA in 2009/2010 and 2010/2011. The objective of the surveys was to estimate the seasonal and spatial use of the study area by birds, particularly diurnal raptors, defined here as kites, accipiters, buteos, harriers, eagles, falcons, and ospreys. The methods for those surveys are briefly described below. See Chatfield et al. (2010, 2011) for a more detailed explanation of how avian use data were collected and analyzed.

Survey Plots

Fixed-point avian use surveys (variable circular plots) were conducted using methods described by Reynolds et al. (1980). During both years of the study, six points were selected to survey representative habitats and topography of the study area while providing relatively even coverage (Figure 2). Each survey plot was an 800-m (2,625-ft) radius circle centered on the point. To the extent possible, survey stations were selected to be consistent between the two years of study; however, due to changes to land access and changes to the project boundary, points 4, 5, and 6 were relocated for the second year of surveys to more accurately assess the area currently planned for wind turbine installation (Figure 2). For the purposes of this risk assessment, golden eagle use data collected at survey points 5 and 6 during the first year of study (2009/10; see Chatfield et al. 2010) were not used in the fatality predictions because the survey plots and viewsheds lie entirely outside of the current project boundary.

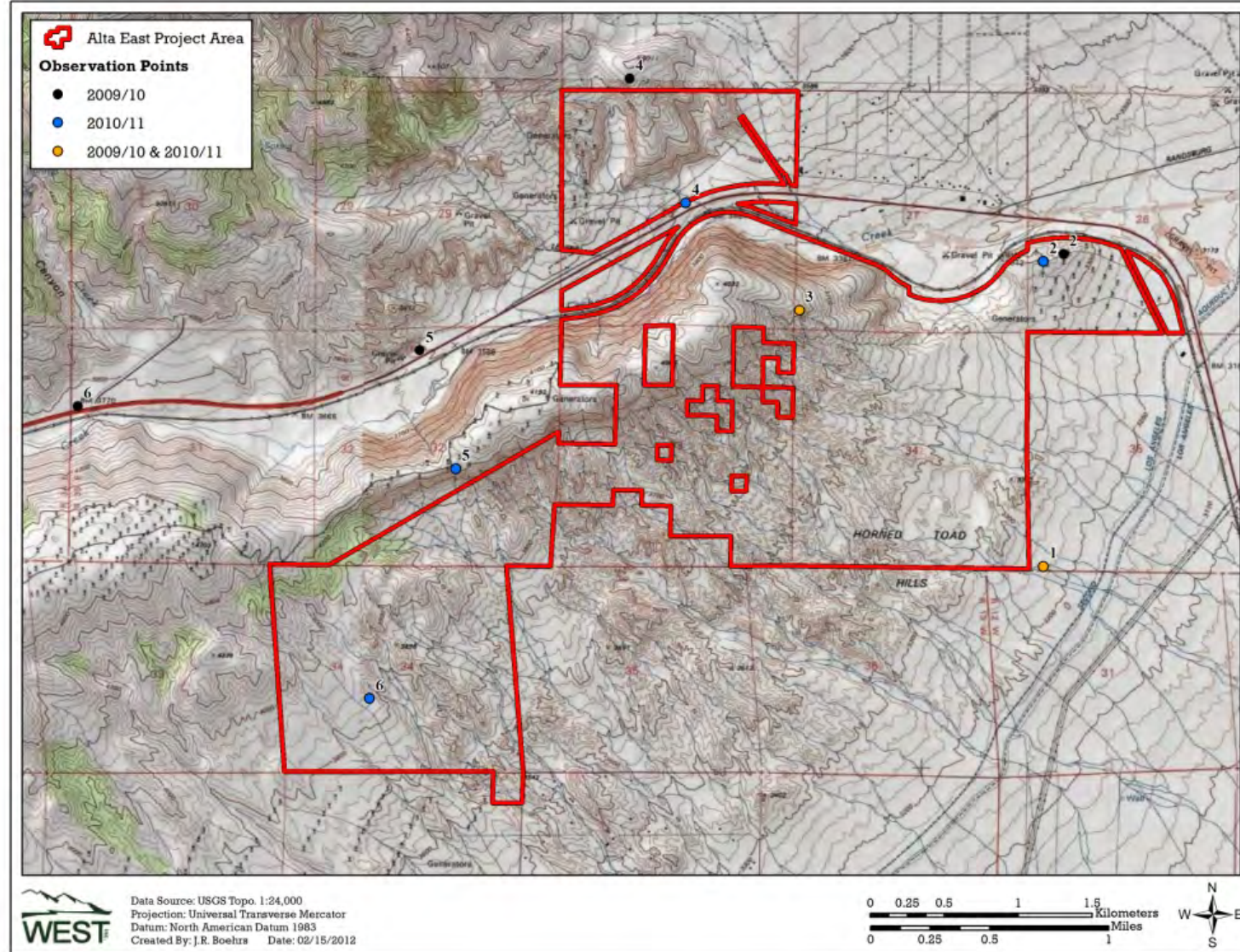


Figure 2. Locations of fixed-point bird use survey stations during the 2009/10 and 2010/11 survey periods at the Alta East Wind Resource Area.

Survey Methods

All species of birds observed during each 30-min fixed-point survey were recorded. Observations of large birds beyond the 800-m radius were recorded, but were not included in the statistical analyses. For small birds, observations beyond a 100-m (328-ft) radius were excluded from the analysis. The date, start, and end time of the survey period, and weather information, such as temperature, wind speed, wind direction, and cloud cover, were recorded for each survey. Species or best possible identification, number of individuals, sex and age class (if possible), distance from plot center when first observed, closest distance, altitude above ground, activity (behavior), and habitat(s) were recorded for each observation. Behavior and habitat type were recorded based on the point of first observation. Approximate flight height and flight direction at first observation were recorded to the nearest 5-m (16-ft) interval. Other information recorded included whether or not the observation was auditory only and the 10-min interval of the 30-min survey in which the observation was initially noted.

Observation Schedule

Sampling intensity was designed to document seasonal bird use within the AEWRA. Fixed-point surveys were conducted from May 11, 2009 through May 6, 2010 and from July 10, 2010 through June 1, 2011. Surveys were conducted approximately once per week during each season: spring (March 1 to May 31), summer (June 1 to August 31), fall (September 1 to November 15), and winter (November 16 to February 28). Surveys were carried out during daylight hours, and survey periods varied to approximately cover all daylight hours during a season. To the extent practical, each point was surveyed about the same number of times.

Survey Results

The two years of avian use surveys completed at the AEWRA in 2009/2010 and 2010/2011 (Chatfield et al. 2010, 2011) resulted in a combined diurnal raptor use estimate of 0.09 birds per 800-m plot per 20-minute survey period (Table 1). For golden eagles, the estimated use was 0.02 birds/plot/20-min survey (Table 1). Seasonal mean use for golden eagles ranged from zero eagles/plot/20-min survey during the spring and summer of 2011 to 0.05 during the winters of 2010 and /2011. Although each point was surveyed for 30 minutes during each visit, diurnal raptor and golden eagle use estimates have been adjusted to 20 minutes to allow for comparison to data collected at other wind energy projects by using only the first 20 minutes of each 30 minute survey period. It should be noted that no eagle observations were excluded via this adjustment.

Mapped flight paths for all golden eagles observed during the surveys are presented in Figure 2. Golden eagles observed at survey points 5 and 6 from the 2009/10 survey period were excluded from the analysis as these survey plots and their viewsheds lie entirely outside of the current project boundary. While eagles observed from point 4 during the 2009/10 study, and from points 1 and 5 during the 2010/11 study were outside of the current project boundary, these observations were included in the risk assessment due to their proximity to the study area and to allow for a more conservative estimate of take.

Table 1. Seasonal and overall mean use (observations per 800-m plot per 20-min survey) by year based on fixed-point observations of diurnal raptors and golden eagles at the Alta East Wind Resource Area.

| Season | Year | Diurnal Raptors | Eagles |
|----------------|-------------|------------------------|---------------|
| Spring | 2010 | 0.05 | 0.01 |
| | 2011 | 0.13 | 0 |
| | <i>Mean</i> | <i>0.09</i> | <i>0.01</i> |
| Summer | 2010 | 0.03 | 0.01 |
| | 2011 | 0.03 | 0 |
| | <i>Mean</i> | <i>0.03</i> | <i>0.01</i> |
| Fall | 2010 | 0.03 | 0 |
| | 2011 | 0.12 | 0.01 |
| | <i>Mean</i> | <i>0.08</i> | <i>0.01</i> |
| Winter | 2010 | 0.17 | 0.05 |
| | 2011 | 0.18 | 0.05 |
| | <i>Mean</i> | <i>0.17</i> | <i>0.05</i> |
| Overall | 2010 | 0.07 | 0.02 |
| | 2011 | 0.12 | 0.02 |
| | <i>Mean</i> | <i>0.09</i> | <i>0.02</i> |

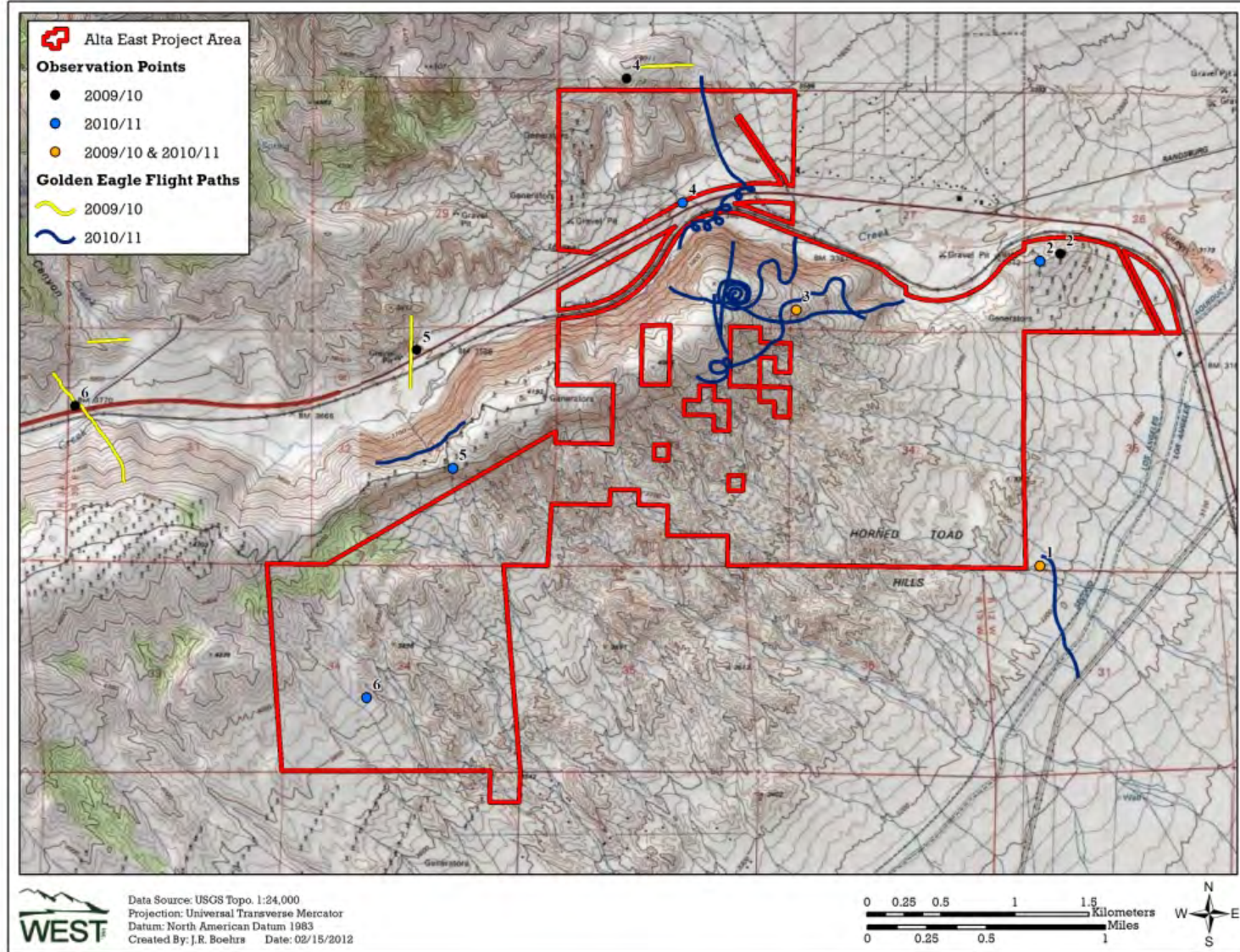


Figure 3. Approximate flight paths of golden eagles observed during the 2009/10 and 2010/11 bird use surveys at the Alta East Wind Resource Area.

FATALITY PREDICTIONS

In this report, we present three different approaches for predicting the expected level of annual golden eagle mortality at the AEWRA. The first approach examines the level of mortality observed at other wind projects in the western and Midwestern US in comparison to the level of golden eagle use at those projects, and correlates with these findings the golden eagle use observed at the AEWRA during two years of site-specific baseline avian use surveys (see Chatfield et al. 2010, 2011). This approach is general, in that it does not consider differences in specific turbine models or rotor diameters, but relies on preconstruction eagle use and post construction fatality data gathered using methods consistent across proposed wind energy projects. The second approach to estimating potential golden eagle mortality involves estimating site-specific mortality predictions for all raptors, as described in Chatfield et al. (2010, 2011), and then looking at the proportion of those raptor observations that were golden eagles. This approach is also general, and does not consider differences in specific turbine models or rotor diameters, however, the analysis generates a take estimate on a per MW basis and therefore can be used to predict eagle fatality rates at the AEWRA using the two proposed turbine models. The third approach applies the collision risk modeling technique prescribed in the USFWS Draft Eagle Conservation Plan Guidance (USFWS 2011) and directly takes into account the differences in the two proposed WTG models in generating WTG-specific take estimates.

Approach 1: Eagle Use / Mortality Rate Comparisons

This approach compares golden eagle use of the AEWRA with golden eagle use at currently operating wind energy facilities in the western and Midwestern US and the level of eagle mortality observed at those facilities. In Figure 4 below, golden eagle use at 13 western and Midwestern wind energy projects is presented in two columns: projects with no recorded golden eagle mortality and projects where eagle mortality has been documented. The data reported in Figure 4 are from wind energy facilities that implemented similar protocols to the avian use surveys conducted at the AEWRA, and have survey results for at least four seasons. Overall mean golden eagle use recorded at the AEWRA during the two years of study (0.02 eagles/800-m plot/20-min survey) is closer to the mean golden eagle use observed at facilities on the left side of Figure 4, where no recorded fatalities have been reported, than to the right side where golden eagle fatalities have been recorded. This suggests that low, if any, golden eagle mortality would be expected in any given year at the AEWRA. However, the actual level of use and the likelihood of mortality in a given year may be influenced by whether or not territories near the AEWRA are occupied and nests are successful. Based on seasonal use of the AEWRA by eagles during the two years of study, risk of mortality is expected to be highest in the winter (Table 1).

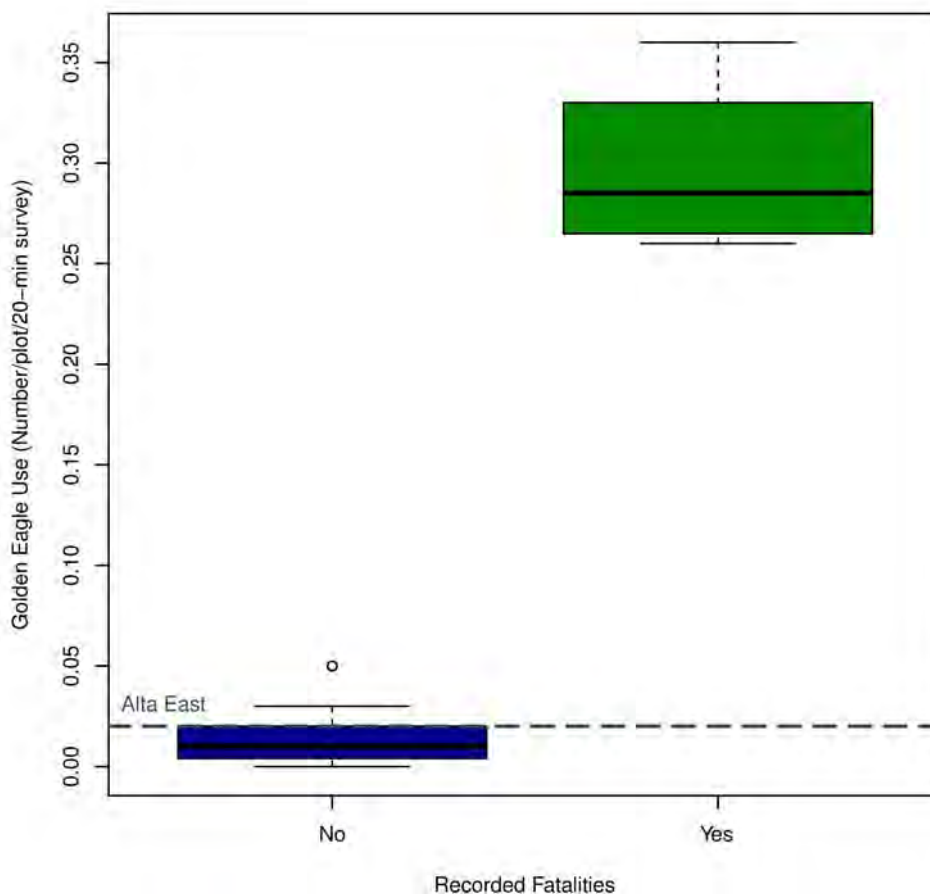


Figure 4. Average pre-construction golden eagle use values for wind energy facilities with and without observed golden eagle fatalities.

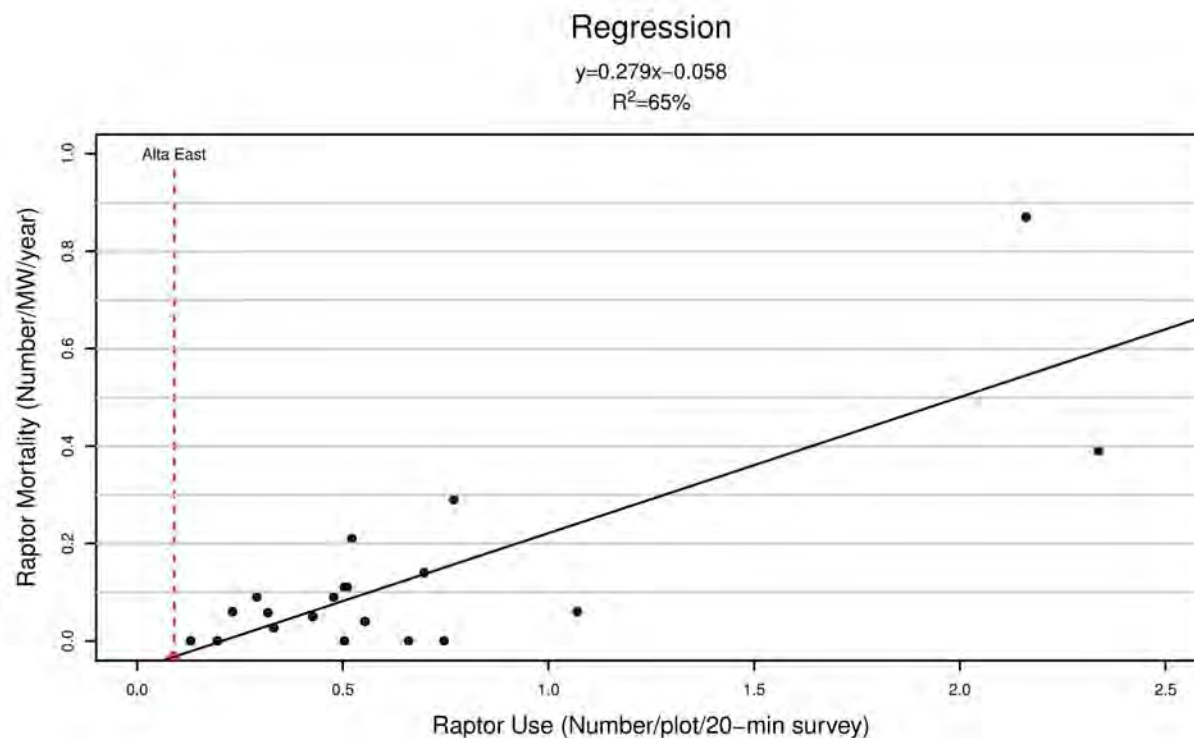
Data from the following sources:

| Wind Energy Facility | Golden Eagle Use | Use Reference | Golden Eagle Fatality | Fatality Reference |
|----------------------|------------------|-----------------------------|-----------------------|--|
| Alta East, CA | 0.02 | Chatfield et al. 2010, 2011 | | |
| Campbell Hill, WY | 0.36 | Taylor et al. 2008 | Yes | Taylor et al. 2011 In Press |
| Diablo Winds, CA | 0.3 | WEST 2006 | Yes | WEST 2006, 2008 |
| Elkhorn, OR | 0.27 | WEST 2005a | Yes | Enk et al. 2011 In Press |
| Foot Creek Rim, WY | 0.26 | Johnson et al. 2000b | Yes | Young et al. 2003b |
| Wild Horse, WA | 0.05 | Erickson et al. 2003c | No | Erickson et al. 2008 |
| Combine Hills, WA | 0.03 | Young et al. 2003c | No | Young et al. 2006 |
| Leaning Juniper, OR | 0.02 | Kronner et al. 2005 | No | Kronner et al. 2007; Gritski et al. 2008 |
| Hopkins Ridge, WA | 0.01 | Young et al. 2003 | No | Young et al. 2007 |
| Stateline, OR/WA | 0.01 | Erickson et al. 2002b | No | Erickson et al. 2004b |
| Vansycle, OR | 0.01 | Erickson et al. 2002b | No | Erickson et al. 2000 |
| Klondike, OR | >0.01 | Johnson et al. 2002 | No | Johnson et al. 2003 |
| Nine Canyon, WA | >0.01 | Erickson et al. 2001 | No | Erickson et al. 2003b |
| Grand Ridge, IL | 0 | Derby et al. 2009 | No | Derby et al. 2010b |

Approach 2: Eagle Mortality as a Proportion of Overall Raptor Mortality

Another approach to estimating potential annual eagle mortality at the AEWRA is to estimate site-specific mortality predictions for all raptors, and then look at the proportion of the overall raptor use attributed to golden eagles. Using methods described in Chatfield et al. (2010, 2011), a regression analysis of raptor use and mortality for 20 new-generation wind energy facilities, where similar methods were used to estimate raptor use and mortality, found that there was a significant correlation between use and mortality ($R^2 = 65\%$; Figure 5). Using this regression to predict overall raptor collision mortality at the AEWRA (based on an adjusted mean raptor use of 0.09 raptors/800-m/20-min survey; Table 1) yields an estimated fatality rate of less than 0.01 fatalities/MW/year or less than one raptor fatality per year for each 100-MW of wind-energy development. A 90% prediction interval around this estimate is zero to 0.19 raptor fatalities per MW per year.

Golden eagle use accounted for approximately 22.2% of the observed raptor use at the AEWRA during the two years of study. Assuming the proportion of eagles observed is related to the proportion of eagle mortality that would be expected, golden eagle use at the AEWRA translates to an eagle mortality rate of 0.0022 eagles/MW/year. The current turbine layout includes 106 WTGs (Figure 1). Using this per MW fatality estimate, yields project-wide eagle mortality estimates of 0.70 eagle fatalities/year (0.0066 fatalities/turbine) if Vestas V90-3.0 MW WTGs are used (318 MW for the entire project), and 0.56 eagle fatalities per year (0.0053 fatalities/turbine) if Nordex N117-2.4 MW WTGs are used (254.4 MW for the entire project) (Table 2). This approach is likely conservative because golden eagles are easier to detect than other raptor species; therefore, the proportion of raptor use attributed to golden eagles is likely overestimated due to higher detectability, resulting in higher fatality estimates using this approach. It is also probable that collision risk for eagles is different than for other raptors, which may influence and/or bias the fatality estimate in either direction. Because it is based on a per MW estimate that does not consider turbine specifications (rotor speed, diameter, height, etc.), it potentially mischaracterizes the actual risk each turbine may present to golden eagles; however, these are likely reasonable estimates given the strength of the correlation in the data used to evaluate raptor use and corresponding raptor fatality at wind energy projects.



Overall Raptor Use: 0.09 raptors/800-m plot/20-min survey

Predicted Fatality Rate < 0.01 fatalities/MW/year

90.0% Prediction Interval (0, 0.19 fatalities/MW/year)

Figure 5. Regression analysis comparing raptor use estimations versus estimated raptor mortality.

Data from the following sources:

| Wind Energy Facility | Raptor Use (birds/plot /20-min survey) | Reference | Raptor Fatality Rate (fatalities/MW/yr) | Reference |
|------------------------|--|---------------------------|--|-----------------------|
| Diablo Winds, CA | 2.16 | WEST 2006 | 0.87 | WEST 2006, 2008 |
| High Winds, CA | 2.34 | Kerlinger et al. 2005 | 0.39 | Kerlinger et al. 2006 |
| Tuolumne, WA | 0.77 | Johnson et al. 2006 | 0.29 | Enz and Bay 2010 |
| Leaning Juniper, OR | 0.52 | Kronner et al. 2005 | 0.21 | Kronner et al. 2007 |
| Hopkins Ridge, WA | 0.70 | Young et al. 2003a | 0.14 | Young et al. 2007 |
| Bighorn, WA | 0.51 | Johnson and Erickson 2004 | 0.11 | Kronner et al. 2008 |
| Klondike II, OR | 0.50 | Johnson 2004 | 0.11 | NWC and WEST 2007 |
| Stateline, OR/WA | 0.48 | Erickson et al. 2003a | 0.09 | Erickson et al. 2004 |
| Wild Horse, WA | 0.29 | Erickson et al. 2003c | 0.09 | Erickson et al. 2008 |
| Elkhorn, OR | 1.07 | WEST 2005a | 0.06 | Jeffrey et al. 2009b |
| Wessington Springs, SD | 0.23 | Derby et al. 2008 | 0.06 | Derby et al. 2010a |
| Biglow Canyon, WA | 0.32 | WEST 2005b | 0.06 | Jeffrey et al. 2009a |
| Zintel Canyon, WA | 0.43 | Erickson et al. 2002a | 0.05 | Erickson et al. 2003b |
| Foot Creek Rim, WY | 0.55 | Johnson et al. 2000b | 0.04 | Young et al. 2003b |
| Buffalo Ridge, MN | 0.33 | Johnson et al. 2000a | 0.03 | Johnson et al. 2000a |
| Combine Hills, OR | 0.75 | Young et al. 2003c | 0 | Young et al. 2006 |
| Dry Lake, AZ | 0.13 | Thompson et al. 2011 | 0 | Thompson et al. 2011 |
| Grand Ridge, IL | 0.20 | Derby et al. 2009 | 0 | Derby et al. 2010b |
| Klondike, OR | 0.50 | Johnson et al. 2002 | 0 | Johnson et al. 2003 |
| Vansycle, OR | 0.66 | WCIA and WEST 1997 | 0 | Erickson et al. 2000 |

Table 2. Regression method to predict golden eagle fatality at the Alta East Wind Resource Area.

| Variables | Site-Specific Raptor and Eagle Use Data | |
|---|---|-------------------|
| Raptor use (birds/plot/20-min survey) | 0.09 | |
| Predicted raptor fatality per MW (Less than 0.01) | 0.01 | |
| Eagle use (birds/plot/20-min survey) | 0.02 | |
| Proportion of eagle use to raptor use | 0.222 | |
| Predicted eagle fatality per MW | 0.0022 | |
| | Project-wide Risk based on Specific Turbine Model | |
| Variables | Vestas V90-3MW | Nordex N117-2.4MW |
| MW/turbine | 3.0 | 2.4 |
| Number of turbines | 106 | 106 |
| Total MW | 318.0 | 254.4 |
| Eagle fatalities per year | 0.700 | 0.560 |

Approach 3: Risk Collision Modeling

The final method for estimating eagle mortality applies the modeling approach prescribed in the USFWS Draft Eagle Conservation Plan Guidance (USFWS 2011). Tables 3, 4, and 5 contain parameters used to calculate a model of collision risk. Separate fatality estimates were developed for the two types of WTGs proposed for the AEWRA: Vestas V90-3.0 MW and Nordex N117-2.4 MW. An avoidance rate of 99% was used in the models following Whitfield (2009), as well as a more conservative avoidance rate of 95% to provide more conservative fatality predictions.

Table 3. Values of parameters used to generate an eagle fatality estimate for the Alta East Wind Resource Area.

| Exposure Rate Calculations | Value |
|--|-----------------|
| Eagle Use (birds/plot/20-minute survey) | 0.02 |
| Use Survey Plot Radius (m) | 800 |
| Average flight time of eagles observed during surveys (min) | 3 |
| Survey Length (min) | 20 |
| Exposure Rate (flight minutes/minutes surveyed/survey area km ²) | 0.00149 |
| # minutes daylight hours | 262,800 |
| # turbines | 106 |
| Total risk area around turbines (Danger Zone) (km ²) | 3.33 |
| Exposure within the Danger Zone (min) | 1,305.78 |

Table 4. Input values and calculations for the probability of collision/min flight in danger zone.

| Exposure Time in RSA or RSV | Vestas V90-3MW | Nordex N177-2.4MW |
|---|-----------------------|--------------------------|
| Rotor Radius (m) | 45.0 | 58.5 |
| Area of Rotor Swept Zone (m ²) | 6,361.73 | 10,751.32 |
| Area of Risk Zone (m ²) | 35,000 | 35,000 |
| Proportion of flight minutes below turbine height | 0.88 | 0.88 |
| Exposure minutes in Rotor Swept Zone | 207.6765 | 350.9733 |

Table 5. Variables for Probability of Collision (Tucker 1996).

| Model Variables | Vestas V90-3MW | Nodex N117-2.4MW |
|---|-----------------------|-------------------------|
| # Blades per turbine | 3 | 3 |
| Rotor Radius | 45.0 | 58.5 |
| Rotor RPM (Maximum Operating Speed) | 18.4 | 13.2 |
| Rotor Angular Speed | 1.93 | 1.38 |
| Wind Velocity (Maximum Operating Speed) | 15 | 20 |
| Axial Induction Factor | 0.25 | 0.25 |
| Average Adult Bird Wingspan (m) | 2.1 | 2.1 |
| Length of Birds (m) | 0.9 | 0.9 |
| Bird Aspect Ratio | 2.33 | 2.33 |
| Bird Air Velocity (m/s) | 14 | 14 |
| Tangential Threshold Speed (m/s) | 25 | 25 |
| P(Collision) ¹ | 0.055 | 0.037 |

Using this modeling approach for Vestas V90-3.0 MW turbines, we estimate a project-wide fatality rate of 0.114 eagles per year (one golden eagle fatality every 8.8 years) at a 99% avoidance rate, and 0.569 eagles per year (one fatality every 1.8 years) based on the more conservative 95% avoidance rate (Table 6). For the Nordex N117-2.4 MW turbines, we estimate a fatality rate of 0.130 eagles per year (one fatality every 7.7 years) at a 99% avoidance rate, and 0.652 eagles per year (one fatality every 1.5 yrs) at the 95% avoidance rate (Table 6).

¹ While the Nordex WTGs have a considerably larger rotor radius than the Vestas WTGs (58.5 m versus 45.0 m, respectively; Table 4), the probability of collision (P) is lower for the Nordex WTGs than for the Vestas due to the slower maximum operating speed (rotor RPM) of the Nordex WTGs (13.2 versus 18.4, respectively; Table 4). Despite having a lower probability of collision (per m² of rotor swept area), the Nordex WTGs result in larger eagle fatality estimates due to the importance of rotor radius (i.e., size of rotor swept area) in the models.

Table 6. Predicted annual eagle mortality based on 99% and 95% avoidance rates at the Alta East Wind Resource Area using the USFWS (2011) modeling approach.

| Mortality Variables | Vestas V90-3MW | Nordex N117-2.4MW |
|---|-----------------------|--------------------------|
| Eagle fatalities per year w/ 99% avoidance rate | 0.114 | 0.130 |
| Eagle fatalities per year w/ 95% avoidance rate | 0.569 | 0.652 |

CONCLUSIONS

The three approaches to evaluating eagle take risk suggest that eagle fatalities may occur, but at very low levels. The analyses generate project-wide fatality estimates for golden eagles ranging from zero to 0.70 eagle fatalities/year. Although some golden eagle fatalities may occur, based on the use data and prediction models currently available to assess risk, it appears that the number of fatalities would likely be small. Based on the variation in seasonal use of the AEWRA by golden eagles observed during two years of study, particularly in the year two dataset, risk of mortality is expected to be highest during the winter, but is unlikely that eagles would be killed at a rate exceeding one eagle every 1.43 years (based on the maximum project-wide estimate generated by these analyses of 0.70 eagle fatalities/year).

While use estimates (i.e., abundance) have shown promise at predicting raptor fatalities in general, use alone may not be a good predictor of eagle mortality. High raptor and eagle mortalities at wind energy facilities have been attributable to multiple factors including: high eagle densities, high prey densities, high turbine densities, and wind turbine/tower design (Erickson et al. 2002b, Hunt 2002). Topographic features that may concentrate eagle activity, such as ridge tops, upwind sides of slopes, and canyons where eagles can take advantage of wind currents that are favorable for soaring, hunting and travelling, as well as for migratory flights, may also increase the risk of collisions with wind turbines (Curry and Kerlinger 1998, NWCC 2010). Therefore, micro-siting of project features in response to the baseline data may reduce or eliminate the likelihood of take suggested by these analyses.

The site-specific information collected to date and the golden eagle fatality predictions suggest that the AEWRA is reasonably likely to take eagles if no avoidance measures are implemented, but it is unclear if that take would be at a rate greater than is consistent with maintaining a stable or increasing population. It is unclear to what degree any eagle mortality at the AEWRA would adversely impact the local population due to lack of information on the population in the region, and a lack of understanding of what level of mortality, if any, could be sustained. At Altamont Pass, where eagle mortalities have been documented to be relatively high, few breeding-age eagles are killed. Most of the fatalities are sub-adults and floaters (non-breeding adult birds; Hunt 2002); however, even with these annual fatalities recorded over a 15-year period at the site, the regional population was estimated to be stable (Hunt 2002). Recent raptor nest surveys continue to show all territories near Altamont Pass to be occupied by breeding golden eagles (100% occupancy, Hunt and Hunt 2006). If there is a delayed impact on the nesting or floating population at Altamont Pass, it has not been documented in the 20 years that the wind energy

facility has been in operation. Furthermore, it might be considered unlikely that the fatalities from Altamont Pass would affect any one local population, but over time the loss of sub-adult and non-breeding adults could lead to broader population level effects, even if undetectable in localized populations. Because golden eagles are a long-lived species with relatively low reproductive output, adult survival is likely a key driver in population stability; hence, the loss of non-breeders and sub-adults may not be evident for many years.

The predicted fatality rates for eagles associated with the AEWRA are extremely low in comparison to Altamont Pass, and although Tehachapi area eagles may be affected differently than those in Altamont Pass, the weight of evidence suggests that the small number of eagle fatalities anticipated for the AEWRA is unlikely to cause an unstable or declining population in the region.

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DEPARTMENT OF THE ARMY

VENTURA REGULATORY FIELD OFFICE
2151 ALESSANDRO DRIVE, SUITE 110
VENTURA, CA 93001

May 24, 2012

REPLY TO
ATTENTION OF

Regulatory Division

Mark Casper
Terra-Gen Power, LLC
11512 El Camino Real, Suite 100
San Diego, California 92130

SUBJECT: Approved Jurisdictional Determination for the Alta East Wind Energy Project

Dear Mr. Casper:

Reference is made to the request (Corps File No. SPL-2011-00558-BAH) dated August 22, 2011 for an approved Department of the Army jurisdictional determination (JD) for the Alta East Wind Energy Project site located near the western boundary of the town of Mojave, Kern County, California. Based on information you provided and our prior knowledge of the region, we have determined there are no waters of the United States on the project site as depicted on the enclosed figure (Figure 3, Surface Water Features and Hydrology). The basis for our determination can be found in the enclosed JD form.

The aquatic resources identified on Figure 3 are intrastate isolated waters with no apparent interstate or foreign commerce connection. As such, they are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorizations from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This letter contains an approved jurisdictional determination for the Alta East Wind Energy Project site. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division, CESP-D-PDS-O, 2042B
1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by July 23, 2012. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to me at the letterhead address by July 23, 2012. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

If you have any questions, please contact me at 805-585-2145 or via e-mail at Bruce.A.Henderson@usace.army.mil. Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce Henderson", with a stylized flourish at the end.

Bruce Henderson
Sr. Project Manager
North Coast Branch
Regulatory Division

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Kevin Martin, Terra-Gen Power, LLC

File Number: SPL-2011-00558-BAH

Date: 05/24/2012

Attached is:

See Section below

| | | |
|---|--|---|
| | INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission) | A |
| | PROFFERED PERMIT (Standard Permit or Letter of permission) | B |
| | PERMIT DENIAL | C |
| X | APPROVED JURISDICTIONAL DETERMINATION | D |
| | PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION II: The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION

If you have questions regarding this decision and/or the appeal process you may contact:

DISTRICT ENGINEER
Los Angeles District, Corps of Engineers
ATTN: Chief, Regulatory Division
P.O. Box 532711
Los Angeles, CA 90053-2325
Tel. (213) 452-3425

If you only have questions regarding the appeal process you may also contact:

DIVISION ENGINEER
South Pacific Division, Corps of Engineers
Attn: Tom Cavanaugh
Administrative Appeal Review Officer
South Pacific Division, CESPD-PDS-O, 2052B
1455 Market Street, San Francisco, California 94103-1399
Phone: (415) 503-6574 Fax: (415) 503-6646
Email: thomas.j.cavanaugh@usace.army.mil

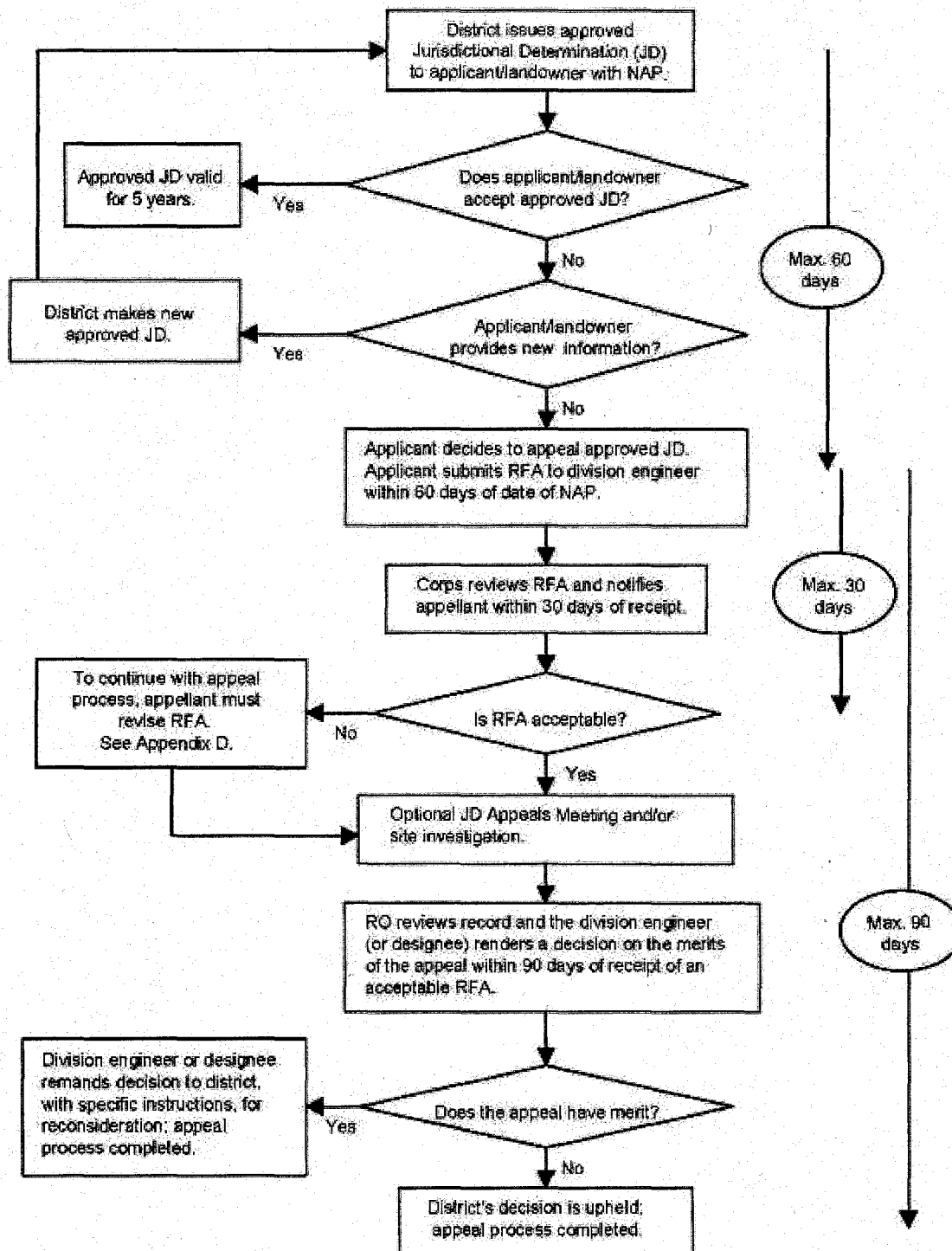
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

Administrative Appeal Process for Approved Jurisdictional Determinations





P.O. Box 1010, Lake Isabella, CA 93240

Historic Preservation Office

October 2, 2012

Applied Earth Works
Joan George
3292 East Florida Ave., Suite A
Hemet, CA 92544

**RE: Draft Environmental Impact Statement for the Proposed Alta East Wind Project,
Kern County California (CEQ # 20120204)**

Ms. Joan George,

The Council for the Kern Valley Indian Community would like to take this opportunity to comment on the proposed Alta East Wind Project. I have not had the opportunity to personally survey the sites but I do know the area in question has been heavily occupied for a very long time by Native Americans in the past 12,000 plus years and inadvertent discovery of prehistoric cultural resources not identified by CH2M Hill are a distinct possibility. Surface deposits in such a heavily populated area would have been picked up by pot hunters a long time ago. Vigilant monitoring by a trained archaeologist and culturally affiliated, trained, experienced Native American cultural resource monitors during ground disturbing activity is imperative to protect cultural resources from damage. CH2M Hill surveyed the North Sky River Project Area and I believe they located 14 eligible sites. To date nearly a hundred eligible sites are recorded, all but a few being prehistoric. Over 10,000 prehistoric artifacts have been collected. 2 prehistoric grave sites and 1 prehistoric cemetery have been disturbed and required reburial. The Tribe has little confidence in the ability of CH2M Hill to conduct adequate cultural resource surveys of projects in our tribal area.

The areas in which the Alta East Wind Project is being developed lies in the middle of an ancient trail system connecting the Southern Sierra, San Joaquin Valley and the central coast with the Colorado River Tribes that traded extensively for millenniums. The Kawaiisu people occupied the surrounding mountains and desert areas. The Kern Valley Indian Community Tribal Members are descendants of both Kawaiisu and Tubatulabal ancestry still live throughout the area and have an acute interest in protecting our cultural and spiritual sites.

Ground Disturbing activity related to the installation operation and maintenance of the wind energy project should be modified when necessary to avoid cultural resources and in the event terrain, property boundaries etc. prevent modification of routes, capping of cultural resources deep enough to prevent any possible trenching for connector lines from violating the site. In the event a site cannot be avoided and the situation does not allow for capping, data recovery of the site will be conducted. In the event a suspected grave site is identified all work will stop, the coroner will be contacted and will make a determination if the remains are human, and if they are Native American. If the remains are identified as Native American the coroner will contact the Native American Heritage Commission who will

contact the Most Likely Descendent who will then make recommendations to the project owner on how to proceed.

The Kern Valley Indian Council, Historic Preservation Office has trained, experienced culturally affiliated Native American monitors available to assist with these projects during ground disturbing activities. A list can be made available upon request.

Thank you for this opportunity to comment on the Alta East Wind Project.

Sincerely,

Robert Robinson
Co-Chairman, Historic Preservation Officer Kern Valley Indian Council

Cc: June Walker Price, Chairman KVIC
Kathy Smith, Vice Chairman, KVIC
Julie Turner, Secretary, KVIC
Dolores Rossback, Treasurer KVIC
Marjorie Albitre, Public Relations Coordinator, KVIC

Bcc: Jeffery Childers, Project Manager, BLM
Donald Storm, Archaeologist, BLM
Jacquelyn Ketchen, Kern County Planning and Community Planning
Department
Kathleen Martyn Goforth, Manager Communities and Ecosystems Division,
USEPA
Ray Bransfield, Senior Biologist, US Fish and Wildlife Service
Craig Bailey, Environmental Scientist, California Department of Fish
and Game